Important Notice

The version 8.0 only supports the following GV video capture cards:

- GV-250 All Series
- GV-600(S) V3.21 V3.20
- GV-650(S) V3.31 V3.30
- GV-800(S) V3.31 V3.30
- GV-1120 V1.02
- GV-1240 V1.02
- GV-1480 V1.02
- GV800-4A V3.10

For more information on the upgrade, please visit our website at http://www.geovision.com.tw/english/5_0.asp, or contact your dealer.

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CHAPTER

1

Configuring Main System

The system prompts you for a Supervisor ID and Password when starting the system for the first time, shown as below:

Figure 1-1

Enter a name you wish to be the Supervisor ID in the ID field. Finish the setup by entering Password, Password Confirmation, and a Hint (optional) that would remind you of the password. Messages entered at the Hint field will only pop up when passwords are entered incorrectly.

- **Auto Login:** Allows auto login as the current user every time when the system is launched. For security purposes, this feature is only recommended for single-user systems.

- **Allow removing password System:** For this setting, see *Setting Up Password* on page 28.

- **:** Click to open the onscreen keyboard and enter the login information.

After setting up the Supervisor ID and Password, launch the program to enter the Main System.

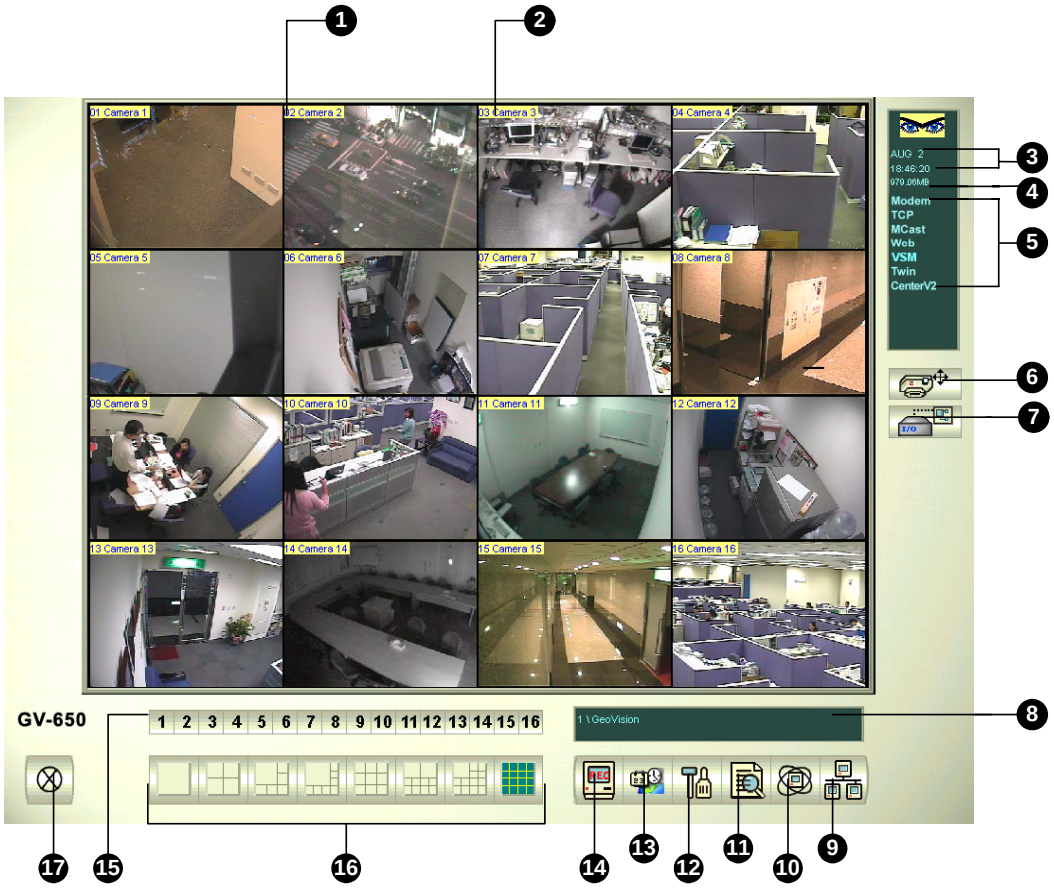


Figure 1-2

The controls in the main screen:

No.	Name	Description
1	Camera Number	Indicates the camera number matching the port number in the GV video capture card.
2	Camera Name	Indicates the given camera name.
3	Date/Time	Displays the current date and time.
4	Storage Space	Indicates the remaining disk space.
5	Connection	Indicates the connection status of remote applications.
6	PTZ Control	Displays the PTZ control panel.
7	I/O Control	Displays the I/O control panel.
8	Location Name	Indicates the GV-System's name, usually named by its geographical location.
9	Network	Enables the connection to remote applications.
10	Camera Scan	Rotates through the screen divisions.
11	ViewLog	Brings up these options: Video/Audio Log, System Log, Search POS Data, POS Live View, Live Object Index, Search Object Index and E-Map.
12	Configure	Accesses System settings.
13	Schedule	Sets up recording schedule.
14	Monitor	Starts monitoring.
15	Camera Select	Selects the desired camera number for main division view.
16	Screen Division	Selects screen divisions.
17	Exit	Brings up these options: Login/Change User, Logout, Minimize, Restart Multicam and Exit.

Press **[F7]** on the keyboard, or click the **Monitor** button to start recording. By default, every camera records with the following settings:

- In Motion Detection mode
- With the 320 x 240 resolution
- With Geo Mpeg4 codec

When working with the system, you will undoubtedly want to change the settings as you go along. The buttons provide quick access to several popular Main System settings. Click any button to see the menus to these settings. Let's start with the Configure button.

System Configuration

Click the **Configure** button and select **System Configure**. You may configure cameras and global recording parameters in this dialog box. Changes made to the General Setting tab would apply to all available cameras attached to the system, while changes made to each camera tab apply only to the individual camera. In I/O Device tab you could add and configure I/O devices. HotLine/Network tab is used to configure the system for connection to network or mobile.

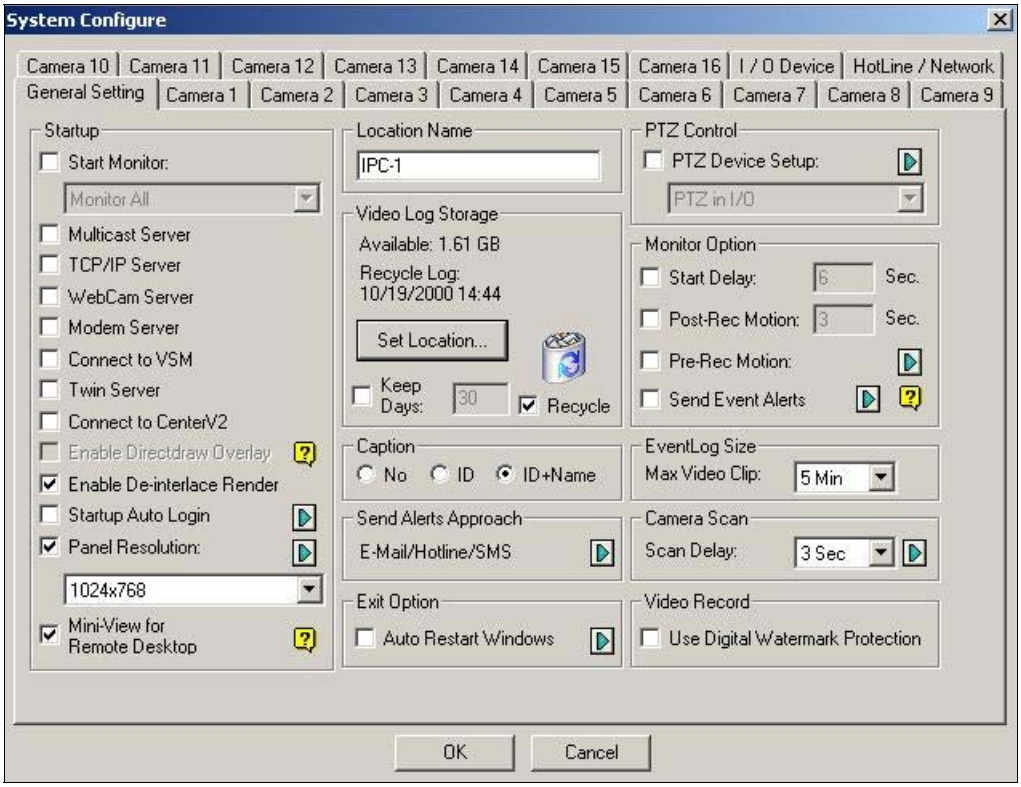


Figure 1-3

Configuring Global Recording Parameters

Let's start with the options in the General Setting tab:

[Startup] The Startup options instruct the system to enable selected features at Main System startup.

- **Start Monitor:** Select one of the following monitor control modes at startup:

  Monitor All: Allows you to monitor all cameras and I/O (if available) at startup. It is the same as to manually click Monitor button and select Start All Monitoring. (For details, see *Start/Stop Monitoring* later in this chapter).

  Schedule Monitor: Allows you to monitor cameras by schedule. Alternatively you may click Schedule button, Schedule Start. Refer to *Recording Schedule* on page 39.

  I/O Monitor: Allows you to monitor all I/O devices. Alternatively you may click the Monitor button, and then select I/O Monitoring.

Note: By adjusting Monitor Control, you may record or invoke alert methods of each camera with individual settings. See *Adjusting Individual Camera* on page 10 to set up your Monitor Control.

- **Multicast Server:** Allows connection to IP Multicast (one of the remote application) at startup. (Or click the Network button and select Multicast Server.)

- **TCP Server:** Allows connection to Remote View (another remote application) by TCP. (Or click the **Network** button and select **TCP Server**.)
- **WebCam Server:** Allows connection to WebCam Server at startup. (Or click the **Network** button and select WebCam Server.)
- **Modem Server:** Allows connection to Remote View by a modem. (Or click the **Network** button and select **Modem Server**.)
- **Connect to VSM:** Allows connection to VSM Server (Or click the **Network** button and select **Connect to VSM**.)
- **Twin Server:** Allows connection to Twin Server at startup. (Or click the Network button and select Twin Server). Twin Server is discussed in Chapter 11.
- **Connect to CenterV2:** Allows connection to CenterV2. (Or click the Network button and select Connect to CenterV2.)
- **Enable Directdraw Overlay:** Enables full-screen at startup. (For the related applications, see *Switching to Full-Screen View* later in this chapter).
- **Enable De-interlace Render:** Avoids interlace of the odd and even video lines. This feature affects only single view mode with the resolution of 640 x 480 and 720 x 480. After enabling the feature, you must restart the GV-System to apply it.

Note:

1. The Enable Directdraw Overlay and De-interlace Render features can greatly enhance image quality. If your VGA card supports DirectX9, enable both settings.
2. You may see a warning message “Directdraw Create Overlay Failed” when trying to use WebCam Remote Control to connect to a server. The message indicates the server has the Enable Directdraw Overlay feature enabled. It only means the remote side will not see the images with DirectDraw applied. It is safe to press **YES** to continue the connection.

Tip: To check the version of your DirectX, search for the file name **dxdiag**. Open the file and find the related information. DirectX 9.0C is also included in the Surveillance System Software CD.

- **Startup Auto Login:** Select and press the **Arrow** button to assign an ID used at system auto startup. After the setup, the system will automatically login using this ID at next startup, without asking for ID and Password. For related settings, see *Launching GV-System from System Tray* on page 19.
- **Panel Resolution:** Select the resolution from the drop-down list that best fits your computer monitor screen.

- **Mini-View for Remote Desktop:** Squeezes all video channels into a single 320x240 view. Since you may use Microsoft Remote Desktop (a feature that comes with Windows XP Professional Edition) to set up the Main System through network, it is important to get smallest size possible data to transfer over network.

1. Click the **Configure** button, and then select **System Configure**.
2. In the System Configure dialog box, select **Mini-View for Remote Desktop** in the Startup section, and then click **OK** to apply the setting.
3. Restart the Main System.
4. To switch between the mini and normal view, click the **Configure** button and select **Mini-View Switch**.

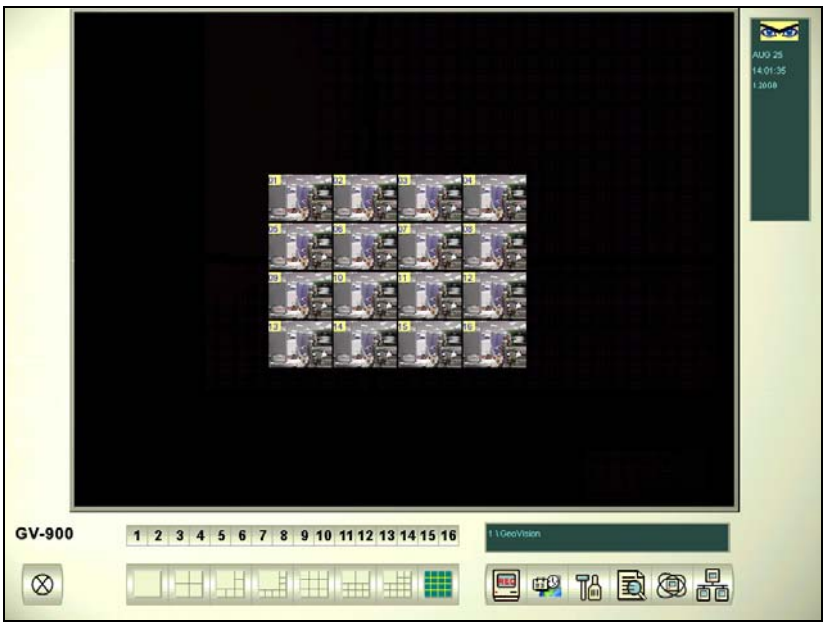


Figure 1-4 Mini View

[Location Name] The given name (maximum 14 characters) is displayed in main screen as the name of the server.

[Log Storage] Selects storage type (recycle or not recycle) and location.

- **Available:** Shows remaining hard disk space.
- **Recycle Log:** Indicates the recording date of the next video file to be erased.
- **Set Location…:** Press Set Location to select location to save video files to.
- **Recycle:** When this option is selected, it will cause the oldest files to be deleted when the system requires storage space for new surveillance videos. If it is not selected, the system will stop recording when disk space is full.
- **Keep Days:** Set to keep the files in storage for a set number of days. Users may specify to recycle at 1 to 999 days. If designated storage space is not big enough to keep all video files for the defined days, Recycle setting then overrides the Keep Days setting.

Note: For storage space, GV-250 or above requires 800MB; GV-900 requires 1GB; GV-1000, GV-1120, GV-1240 and GV-1480 require 1.2GB at least. When one partition fell short than minimum, video files will automatically be saved to next available hard disk; when total available storage space is lower than minimum, the system will stop recording and show a *Disk Space Low!* Message.

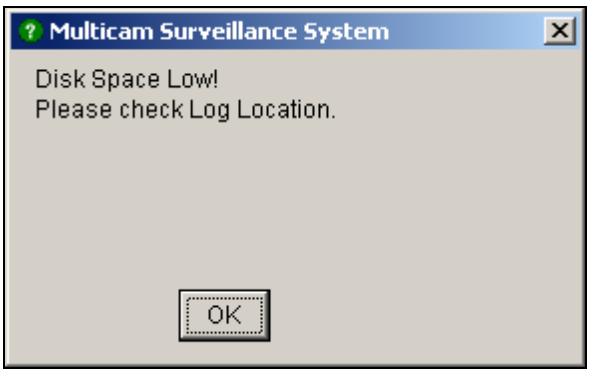


Figure 1-5

To solve the space shortage problem, you may add more hard disk space to the system, or to delete/backup your video files for more storage space. To correctly delete or back up video files, see Chapter 5 for more details.

[Caption] Enters heading to have it displayed on the upper left-hand corner of the camera screen. You may choose No for no heading; ID to show only camera ID, or ID+Name to show both camera ID + Name.

[Send Alerts Approach] Click the arrow button to choose whether to be notified by E-mail, telephone or SMS when alert conditions occur under the surveillance area.
For the telephone setup, see *Configuring Hotline/Network Notification* on page 16.
For the E-mail setup, see *Sending Alerts thru E-Mail Accounts* on page 28.
For the SMS setup, see *Short Message Service* in Chapter 10.

[Exit Option] Check the box to enable the feature. Press the blue **Arrow** button to switch between Select **Auto Shutdown** and **Auto Restart Windows**. **Auto Shutdown** closes Windows OS after exiting GV-System. **Auto Restart Windows** restarts Windows OS after exiting a GV-System.

[PTZ Control] Adds PTZ cameras to the system. See the later section of *PTZ Control Panel* for operation details.

[Monitor Option]

- **Start Delay:** Starts monitoring after x second(s) when the system is activated.
- **Post-Rec Motion:** Keeps on recording for a set period of time (1-10 seconds) after motion stops.

- **Pre-Rec Motion:** Records video for a set period of time before motion starts. This feature allows you to choose RAM or HDD as a pre-recording buffer. The difference between the two is that RAM can save smaller pre-record from 1 second to 1.5 minutes, while the hard disk can save larger one from 1 minute to 45 minutes.

1. Enable the **Pre-Rec Motion** option.
2. Click the **Arrow** button beside. This dialog box appears.

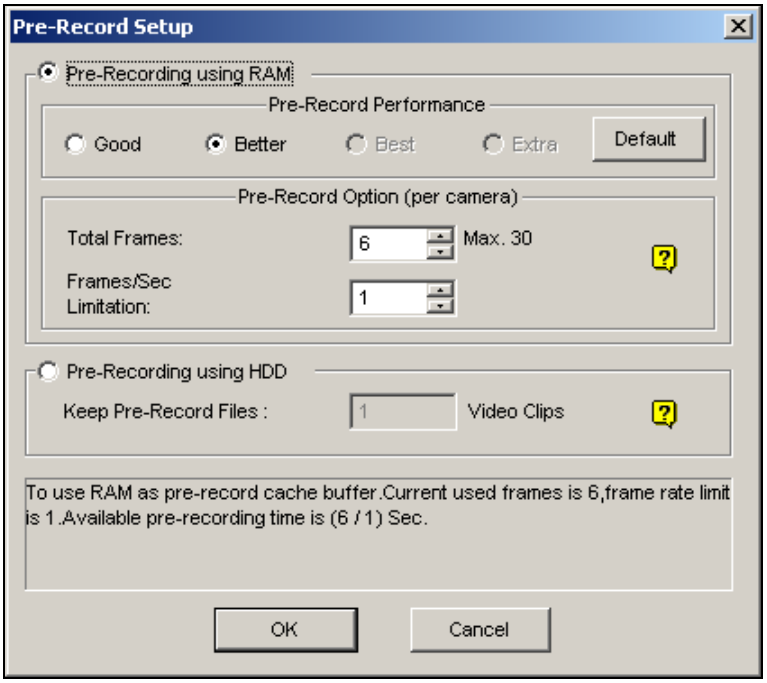


Figure 1-6

[Pre-Record Performance] The amount of physical memory of the computer that the system is running on determines the pre-recording performance. Some options are grayed out if the computer does not have enough memory for the selections.

This table shows the maximum pre-recording frame rate and the physical memory requirements of each setup:

	Good	Better	Best	Extra
Maximum pre-recording frames per camera (fps)	15 fps	30 fps	60 fps	90 fps
RAM required	128 MB	256 MB	512 MB	768 MB

Note: The recording frame rate is based on a 320x240 recording size.

[Pre-Record Option (per camera)] Determines the number of pre-record frames.

- **Total Frames:** Specify the maximum pre-recording frames of the system.

- **Frame/Sec Limitation:** Specify the maximum pre-recording frame rate (fps) of a camera.
  Dividing the Total Frames by Frames/Sec Limitation, you will get the pre-recording duration of each camera. For example:

  $$\text{Pre-recording duration} = \frac{\text{Total Frames}}{\text{Frame/Sec Limitation}} = \frac{30}{6} = 5 \text{ seconds}$$

[Pre-Recording using HDD] Use the hard disk as a pre-recording buffer. This method gives you much longer pre-recording time.

- **Keep Pre-Record Files:** Specify the number of video clips for pre-record. The maximum number of video clips you can specify is 9, and the time range of one video clip is from 1 minute to 5 minutes. So the pre-recording time can be from 1 minute to 45 minutes. For the video clip, see the *[EventLog Size]* below.

- **Send Event Alerts:** Allows you to send out the assigned E-Mail/Hotline/SMS notification when the selected alert conditions occur. To enable the function, follow the steps below.

1. Check the **Send Event Alerts** option, and click the **Arrow** button beside to display this window.

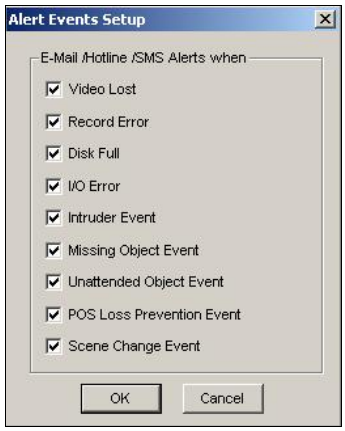


Figure 1-7

2. Select the desired alert events to send out the assigned notification, and then click **OK** for the application.

The alert events of Intruder Event, Missing Object, Unattended Object, and POS Loss Prevention Event are only available when the alarm settings are activated in Counter Application, Object Monitor, and POS Application separately.

Note: To select the type of notification, see *[Send Alerts Approach]* on page 7.

[EventLog Size] Determines the amount of time (from 1 to 5 minutes) of each event file. If you select 5 Min, a 30-minute event will be chopped into six 5-minute event files; if you select 1 Min, a 30-minute event will be chopped into thirty 1-minute event files. To decide what to set up here, consider how often you back up your event files, and how intensive the activity is in your surveillance area. Smaller file size makes backup process faster.

[Camera Scan] Select to rotate through screen divisions. Click the drop-down list and specify the amount of time that elapses before switching to the next screen division group. Press the **Arrow** button to select the mode of screen divisions.

[Video Record] Click to watermark all recorded videos. Watermark is a way to verify the authenticity of video streams, and to ensure that they have not been tampered with or modified in any way.

Adjusting Individual Camera

Select any camera tab to make change only to the selected camera. Choose the Configure button, System Configure, Camera XX **(XX represents camera number) to display this** dialog box:

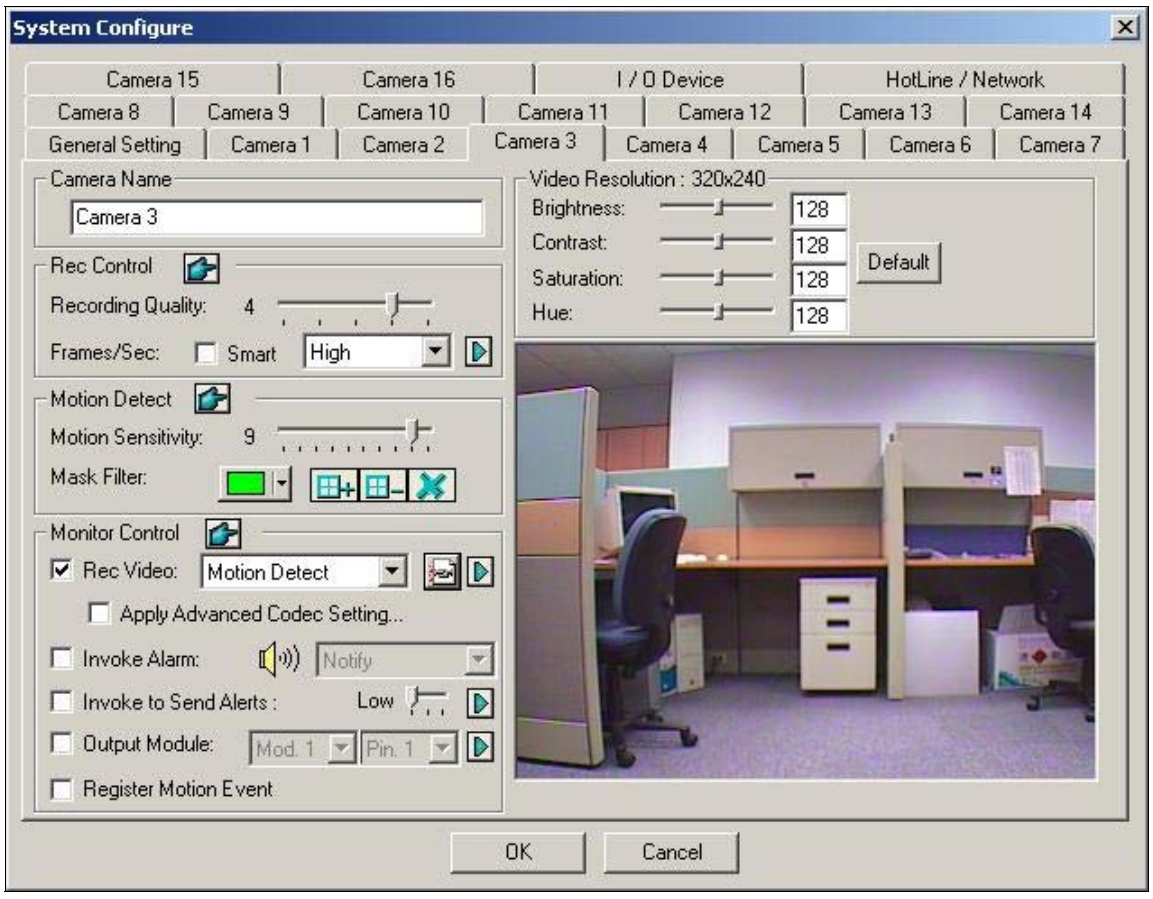


Figure 1-8 *Camera Settings*

Several settings could be configured here:

[Camera Name] The name entered here will appear in the upper-left hand corner of the camera screen.

[Rec Control] The Rec Control section allows you to set each camera's recording quality. The camera's recording quality is based on its resolution and compression rate. Higher quality picture will require more storage space.

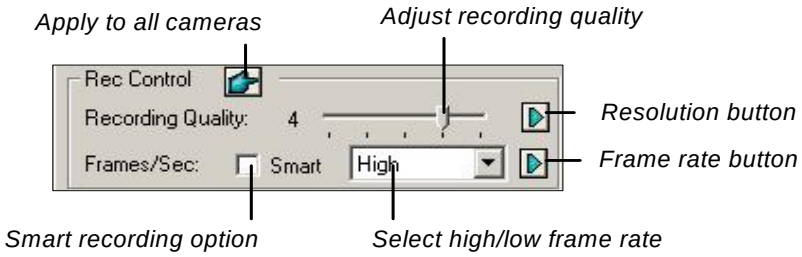


Figure 1-9

- **Recording Quality:** Allows you to adjust the video quality in 5 levels. Higher value means lower compression rate.

- **Resolution Button:** This button is only available after you change the default video resolution (see *Choosing Video Source* on page 30). Click to select recording resolutions.

- **Frame/Sec:** Allows you to adjust camera's recording frame rate. There are three options available: Smart, High, and Low.

  Smart: The system will distribute as many frame rates as possible to the camera where motion occurs.

  High: The system will distribute high percentage of frames (not a definite frame number) to the selected camera while the other cameras will share rest of the frame rates. Assuming that all cameras are in action, selecting High ensures this camera always receive higher frame rate than the rest of the cameras. Effect can be seen in live mode.

  Low: The system will distribute low percentage of frame rates to the selected camera. Assuming that all cameras are in action, certain cameras are of least importance. The system can be set Low in order to allow frame rate to go to more important cameras.

- **Frame Rate Button:** Allows you to set the maximum recording frame of this camera so as to save storage space.

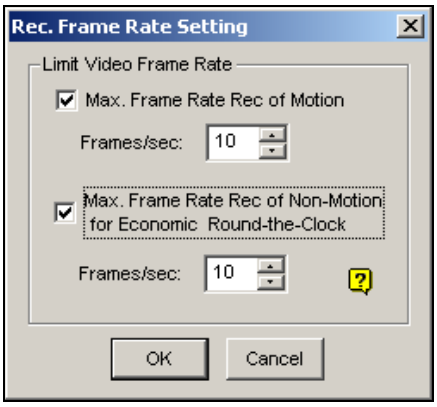


Figure 1-10 *Frame Rate Settings*

Max. Frame Rate Rec of Motion: Set the maximum frame rate on motion detection. For example, if you set 10 Frames/sec in the field, the maximum frame this camera will record is 10 frames/second. This setting does not mean it always records at 10 frames/second because the actual recording frame rate is also affected by other settings in the system and CPU loading.

Max. Frame Rate Rec of Non-Motion for Economic Round-the-Clock: This option provides a space-saving solution for the round-the-clock recording. Set the maximum frame rate for non-motion periods so as to save as much storage space as possible.

[Motion Detect]

- **Motion Sensitivity:** There are 10 levels of sensitivity for motion detection. The higher the value, the more sensitive the system is to the motion.
- **Mask Filter:** Mask instructs the system to ignore movement within the masked area. Mask could be applied to repetitive motion that should be ignored within the surveillance area, such as street trees. Buttons used to modify the masked area are as below:

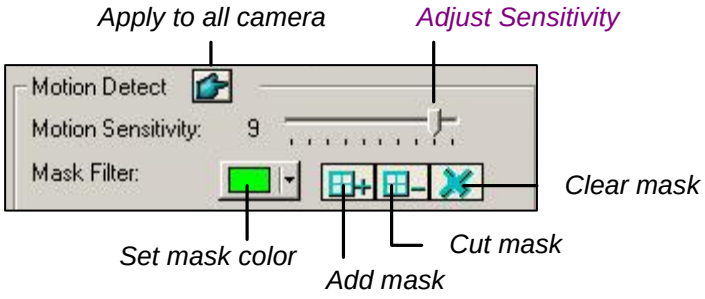


Figure 1-11

[Monitor Control]

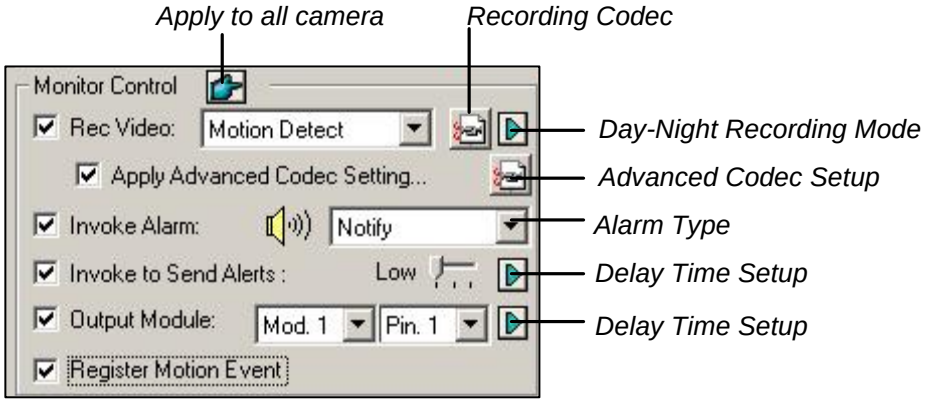


Figure 1-12 *Monitor Control Setup*

- **Rec Video:** Enable the recording function. Use the drop-down list to select the desired recording mode: Motion Detect, Round-the-Clock or Day/Night.
  Recording Codec: Select the method of recording compression for your video: Wavelet, Mpeg4, Geo Mpeg4, Geo Mpeg4 (ASP) or Geo H264.
  If your video resolution is set to 720 x 480 (720 x 576) or above, the only choices here are Geo Mpeg4, Geo Mpeg4 (ASP) and Geo H264.
  For details on video resolution, see *Choosing Video Source* on page 30.
  For details on Geo Mpeg4 (ASP), see *Geo Mpeg4 (ASP) Advanced Settings* on page 15.
  Arrow button: Click to bring up the Day-Night Recording Mode setup dialog box as shown on page 14.

- **Apply Advanced Codec Setting:** See *Geo Mpeg4 (ASP) Advanced Settings* on page 15.

- **Invoke Alarm:** Sends computer alarm (.wav sound file) on motion detection.

- **Invoke to Send Alerts:** Sends an assigned alert (E-Mail/Hotline/SMS) when motion occurs. Use the slider bar to specify the motion duration to invoke the alert. The choices include High (0.5 seconds), Normal (1 second), and Low (1.5 seconds). For example, suppose you choose High. When motion remains for 0.5 seconds, the alert will be sent out.
- **Right Arrow button:** Click to set the delay time to activate assigned alerts.

- **Output Module:** Triggers the specified output pin on motion detection. Use the drop-down list to select an output pin to perform this function.
- **Right Arrow button:** Click to set the delay time to activate the assigned output module.

- **Register Motion Event:** Records motion events to System Log.

Note: The delay time functions in **Invoke to Send Alerts** and **Output Module** allow you time to deactivate prior alert and output settings. To deactivate these settings, you may stop monitoring or enable the assigned input module set at "**Deactivate notification when selected pin ON**" in Figure 2-9, in Chapter 2.

[Video Resolution] Allows you to adjust video characteristics such as brightness, contrast, saturation, and hue.

Setting Up Day - Night Recording Mode

Day-Night Recording allows you to set up different recording modes for different time frames of the day. Each day can be divided to 4 time frames, each represented by 1 Span (up to 4 Spans).

Click the **Day-Night Recording Mode** button in Figure 1-12, and this dialog box appears.

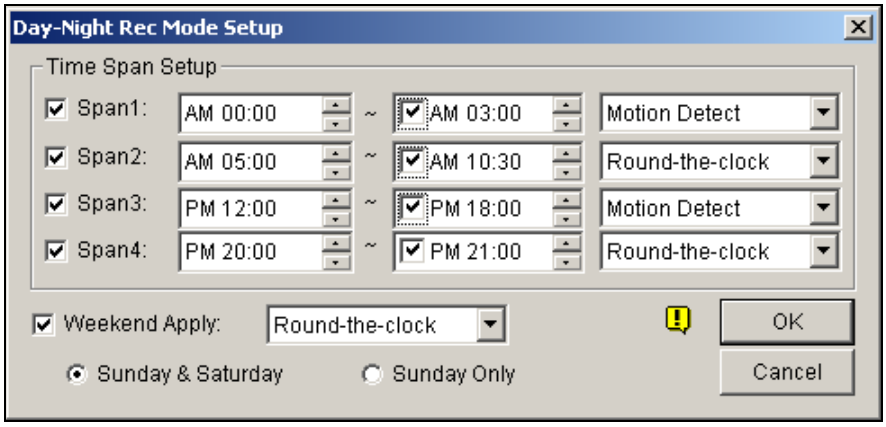


Figure 1-13

1. Enable **Span1** and specify the Start time in the first time field; click the check box in the second time field and specify the End time.
2. Use the drop-down list to select recording mode for the Span 1.
3. Repeat above steps to set up multiple spans if required.
4. If you do not wish to apply your settings to the weekends, enable the **Weekend Apply** option and select recording mode for the weekend. Use the radio button at the bottom to define whether your weekend includes Sunday and Saturday or Sunday only.
5. Click **OK** to apply the settings.

Note: If the End time field is disabled, the span will run to the start of the next span.

Geo Mpeg4 (ASP) Advanced Settings

The Geo Mpeg4 (ASP) codec supports a number of advanced settings that allow experienced users to fine tune the encoding process.

In Figure 1-12, check the **Apply Advanced Codec Setting** option, and then click the button beside. This window appears.

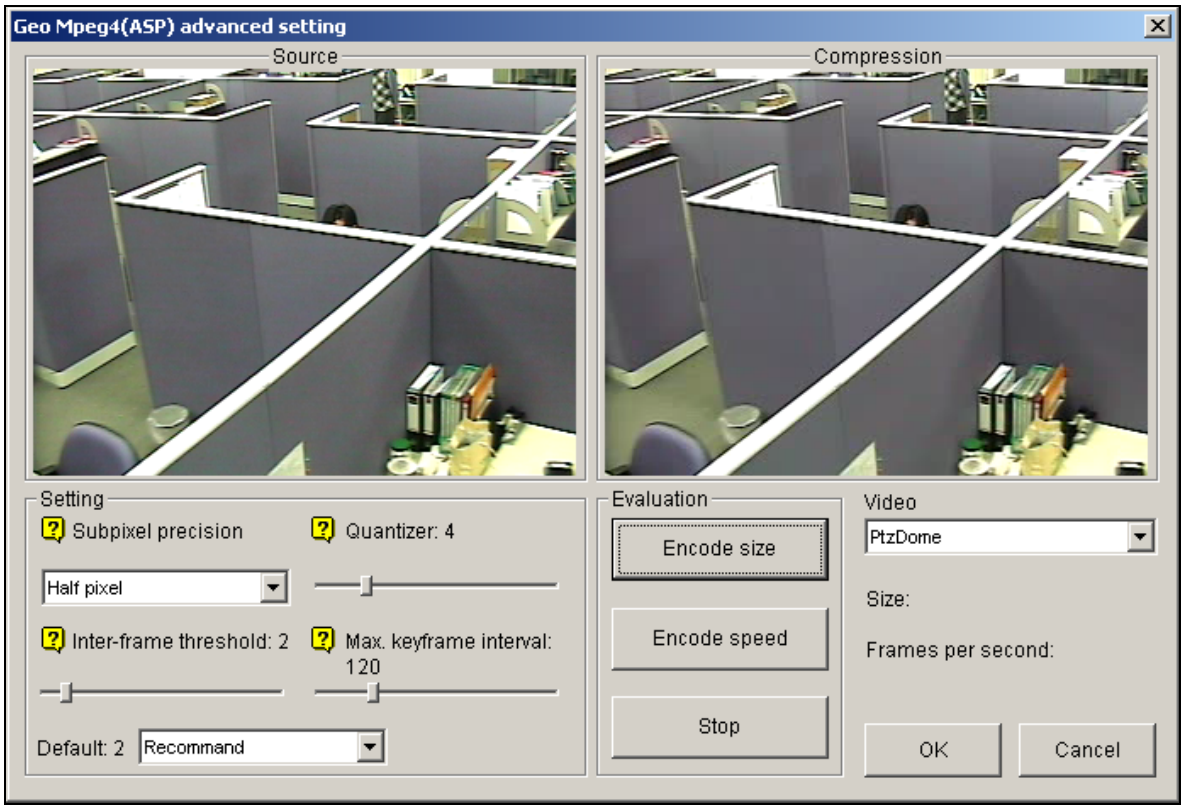


Figure 1-14

[Setting]

- **Setting:** Click the drop-down list to select **High speed**, **Recommend**, or **High compression rate** for default configurations. Or, select **User-defined** to define encoding settings yourself.
- **Subpixel precision:** Click the drop-down list to select Full, Half or Quarter pixel.
  Full pixel: Fastest compression speed, medium compression rate, and normal image quality.
  Half pixel: Fast compression speed, high compression rate, and better image quality.
  Quarter pixel: Slow compression speed, highest compression rate, and better image quality.
- **Quantizer:** Raising the value will improve compression speed and dramatically increase compression rate, but reduce image quality.
- **Inter-frame threshold:** Raising the value will improve compression speed and rate, but reduce image quality slightly.

- **Max. keyframe interval:** Raising the value will extend the duration between key frames and increase compression rate, but reduce image quality slightly. Compression speed remains the same.

[Evaluation]

- **Encode size:** Click to calculate the encoding size based on your encoding settings (see **[Setting]** above) and assigned video clip (select **PTZ dome** or **street** from the drop-down list). Click the **Stop** tab to stop the evaluation.
- **Encode speed:** Click to calculate the frame rate based on the encoding settings (see **[Setting]** above) and assigned video clip (select **PTZ dome** or **street** from the drop-down list).

Configuring Hotline/Network Notification

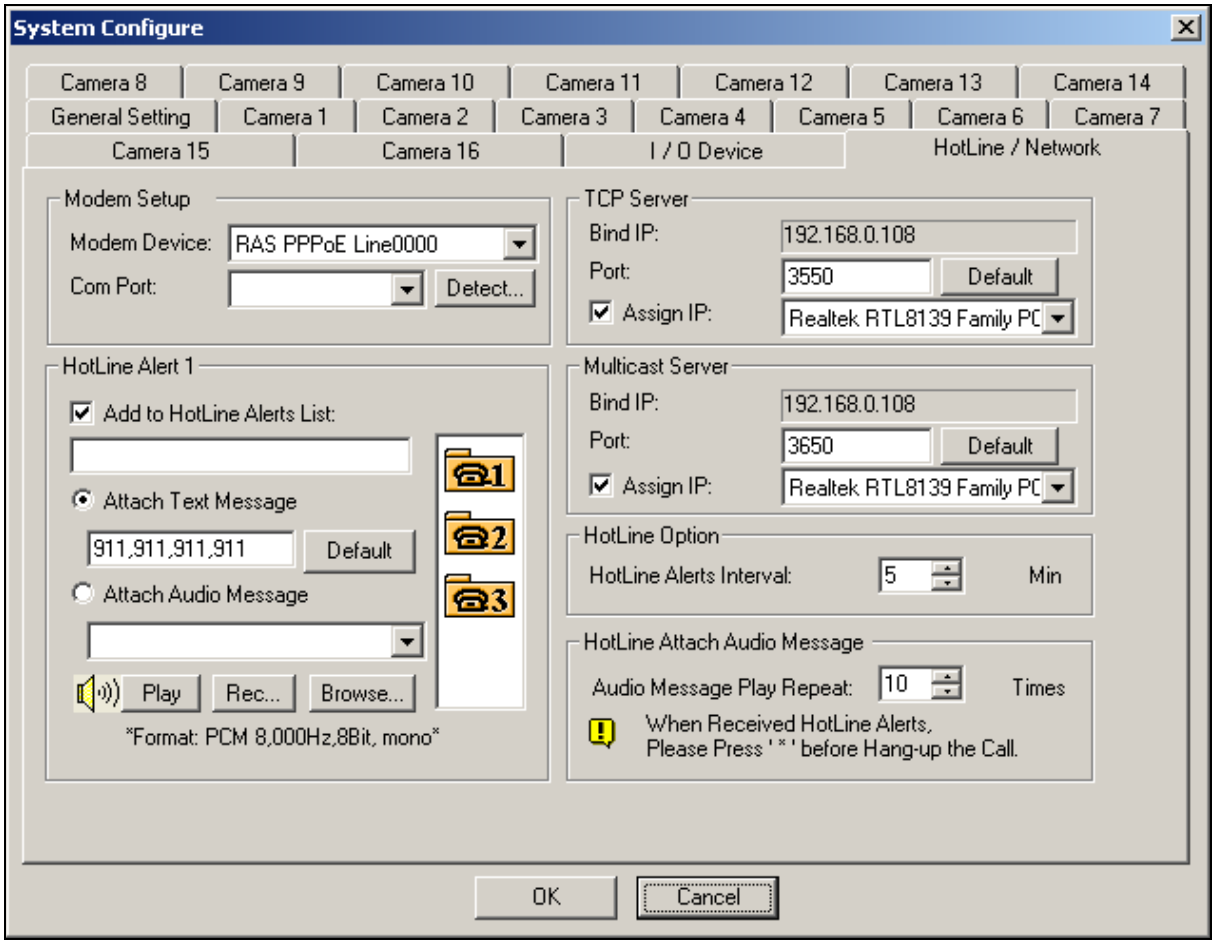


Figure 1-15

[Modem Configure] If you have installed modem in this PC, select the corresponding device and port, then press **Detect** button to test your modem.

Note: Internal modems (PCI or ISA) are not recommended.

[HotLine Notice x] The event can be set to trigger phone calls or pagers, up to three (3) units. A text message may be sent to the pager.

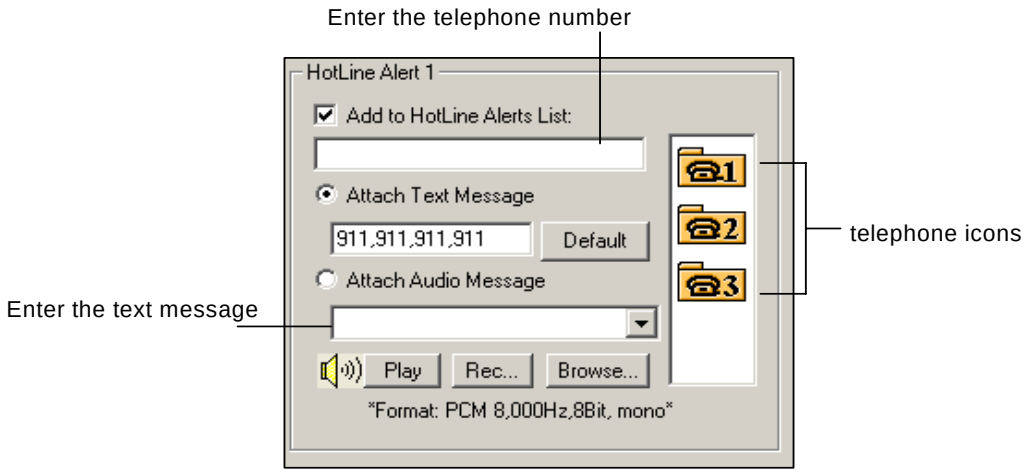


Figure 1-16

1. Click a **telephone** icon.
2. Enable the **Add to Pager/Tel hotline Notice List** option.
3. Type the telephone or the pager number in the field.
4. Enable **Attach Text Message** and type the text messages to be sent to a pager.

The system allows you to send a custom sound file to telephone. Your computer must have microphones connected to the MIC input of GV-System for this operation. To record a sound file, follow these steps:

1. Click the **Rec** button to bring up the following dialog box:

Figure 1-17

2. Click the **Record** button to start recording. Speak the message script clearly to the microphone. Click **Stop** button when it is done.
3. Click the **Play** button to listen to the recording. To save this sound file, click **File**, select **Save as**, and then click the **Change** button. This brings up the Sound Selection dialog box, shown as:

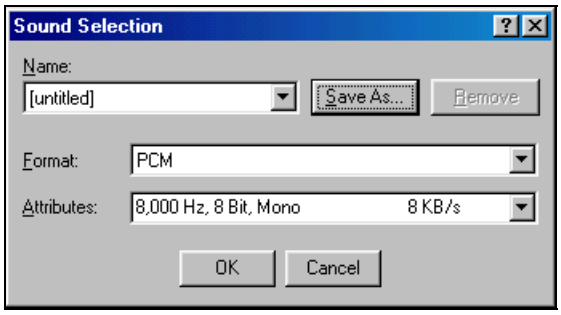


Figure 1-18

4. Select ***PCM 8,000 Hz, 8-bit Mono*****,** the only format supported for this feature, and then click **OK**.

To find a sound file, click the Browse button to locate the file. Add the path of the file to the field, and the file will be sent with the telephone calls.

[TCP Server] Allows you to setup TCP server. Enable **Assign IP** to enable the drop-down list. Select the network card from drop-down list and your IP address will be displayed in Bind IP. The default port number for TCP server is 3550; you may assign different port by entering the port number in the Port field.
[Multicast Server] Allows you to setup the Multicast server; its operation is similar to the TCP server setup described above. The default port number for Multicast server is 3650.

Note: GV-System automatically checks the dynamic IP of your PC every one minute. This ensures connection of remote applications, including Remote View, IP Multicast, WebCam, and Remote Playback.

[HotLine Option] If motion persists, decides how often, specified in minutes, the system should send a notification to you before the motion ends.
[HotLine Attach Audio Message] Specifies how many times to repeat the audio message when a telephone call is made to you.

Selecting Screen Layout

This feature gives you the option of screen layout for the 8, 12 and 16 screen divisions.

1. Click the **Configure** button, and then select **System Configure**. The System Configure window appears.
2. In the Startup section, click the **Arrow** button next to the Panel Resolution item to call up the following window. The left mode is the default layout; the right is the enhanced layout.

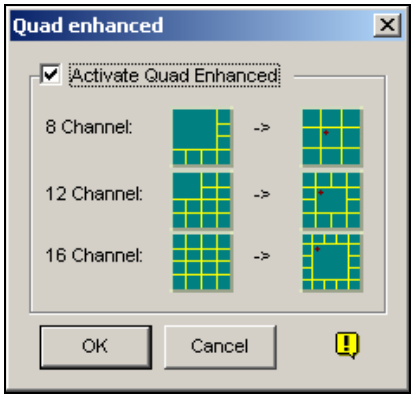


Figure 1-19

3. For the enhanced layout, click the **Activate Quad Enhanced** option, and click **OK**.
4. Restart the GV-System to apply it.

Note:

1. When the enhanced screen layout is applied, the camera 1 view will show on the central screen; when the popup feature is enabled, the pop-up view will show on the central; when the camera scan feature is enabled, the scanned view will show on the central.
2. If you are using the DSP card, GV-System won't support the enhanced screen layout.

Launching GV-System from System Tray

The feature lets GV-System appear in the system tray when you launch Windows, instead of displaying the system login window. To enable the feature, follow these steps:

1. Click the **Configure** button, and then select **System Configure**. The System Configure window appears.
2. In the Startup section, click the **Arrow** button next to the Startup Auto Login item to display the following window.

Figure 1-20

3. Check the **Startup Silently Hide into System Status Bar** option, and then click **OK** to close the window.
4. Restart the GV-System. You will see the following icon shown on the system tray.

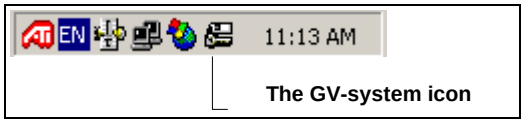


Figure 1-21

Camera / Audio Install

Click the **Configure** button and select **Camera / Audio Install** to bring up the following dialog box:

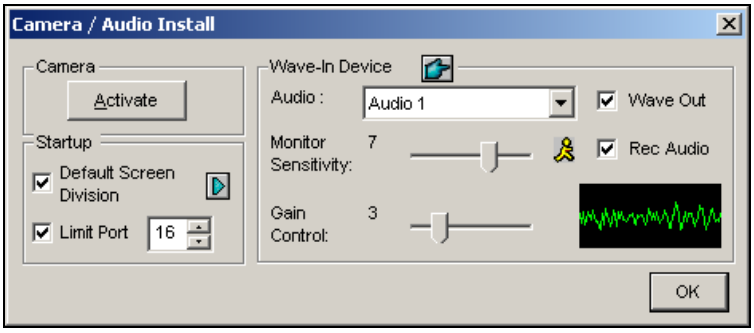


Figure 1-22

[Camera] Click the **Activate** button and specify the cameras to be viewed by default. Cameras deselected from viewing do not affect the cameras being recording.

[Startup] Configure the startup camera screens and screen divisions.

- **Default Screen Division:** To select the desired screen divisions at startup, check the item and click the right arrow button.
- **Limit Port:** To restrict camera screens at startup, check the item and select desired port numbers. This function will execute at next system startup.

[Wave-in Device] Adjust audio devices to record and listen to live sound. Please note this feature is only available for the resolution of 320x240, 640x240, 640x480 De-interlace, 720x240 (only NTSC) 720x480 De-interlace (only NTSC), 720x288 (only PAL), and 720x576 De-interlace (only PAL).

- **Audio:** Choose to set up an audio channel from the drop-down list.
- **Monitor Sensitivity:** Adjusts sensitivity of the audio that will be detected. The higher the value, the more sensitive it is to the surrounding sound.
- **Gain Control:** Increases or decreases the gain of the microphone.
- **Wave Out:** Select to listen to live audio at the server PC.
- **Rec Audio:** Enable to activate the audio recording function.

Setting Up Auto Reboot

The Auto Reboot feature restarts your Windows at a scheduled time. Click the **Configure** button, and then select **Auto Reboot Setup** from the menu to bring up this dialog box.

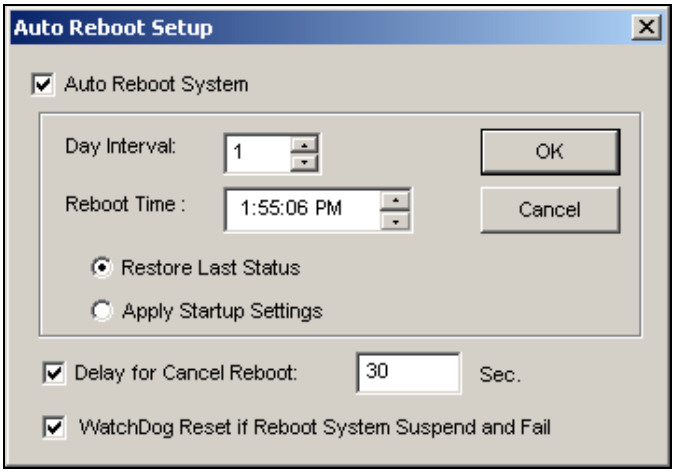


Figure 1-23

[Auto Reboot System]

Enables the setup for reboot time. Specify how often (from 1 to 14 days) at the Day Interval selection field, and when the Windows should reboot at the Reboot Time.

- **Restore Last Status:** The system will resume the last operation after rebooting, e.g. camera recording.
- **Apply Startup Settings:** The system will apply your Startup settings in the System Configure window after rebooting.

[Delay for Cancel Reboot] When the item is checked, a warning message will appear and count down your specified time before the reboot schedule begins. Clicking the Cancel button on the prompt will cancel the rebooting.

[WatchDog Reset if Reboot System Suspend and Fail]

Prior to Reboot Time, if GV-System finds any abnormal Windows operation that may hinder the Auto Reboot, GV-System will instruct a hardware reboot of Windows. The feature is available only in GV-600, GV-650, GV-800, GV-900, GV-1000, GV-1120, GV-1240 and GV-1480.

Note: GV-System must already be added to Windows Startup menu; only so will the Windows automatically restart GV-System after a reboot. Also, make sure you've correctly connected a GV video capture card to your motherboard for the hardware watchdog feature.

Logging System Activities into System Log

GV-System can monitor security events by recording the login and logout of system resources. No events will be recorded to the System Log until you activate the desired event logs. To activate the log, click the **Configure** button, and then select **System Log Setting** to display the following dialog box.

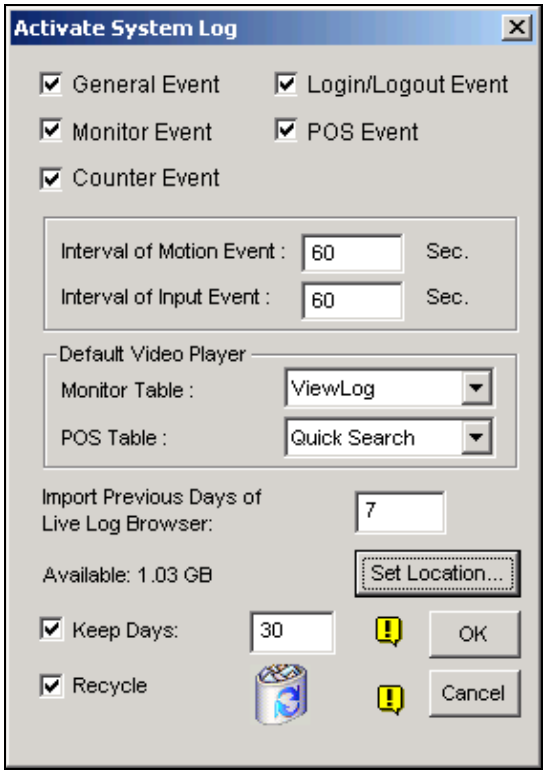


Figure 1-24

- **General Event:** Record system startup/exit, network server start/stop, and recording start/stop.
- **Login/Logout Event:** Record local user login/logout GV-System and WebCam Server.
- **Monitor Event:** Record motion-triggered and I/O-triggered events. For this feature, you must also enable *Register Motion Event* in Figure 1-12 and *Register Input Event* in Figure 2-1 in Chapter 2.
- **POS Event:** Record POS transaction data.
- **Counter Event:** Record counting results.
- **Interval of Motion Event:** Specify the log interval between motion-triggered events. This setting could prevent the System Log growing too big when trying to log all events under a motion-intensive surveillance area.
- **Interval of Input Event:** Specify the log interval between I/O-triggered events.

[Default Video Player]

- **Monitor Table:** Specify the playback software for playing back monitor events. Each playback application is discussed in details in Chapter 4.
- **POS Table:** Specify the playback software for playing back POS events.

[Import Previous Days of Live Log Browser] Specify how many days of data to be loaded to the System Log.

- **Set Location:** Click the Set Location button to specify a storage path. The available free space will be displayed in left hand side.
- **Keep Days:** Set the number of days to keep log files.
- **Recycle:** Enable the system to delete old log files to make space for new files when HDD free space is below 500MB.

To view and learn more about System Log, see page 35.

Popping Up a Camera Window on Motion Detection

Using this feature, you may view the pop-up camera at the moment event occurs. To set up, click the **Configure** button, and then select **Camera Popup Setting**. This brings up the following Camera Popup Setting dialog box.

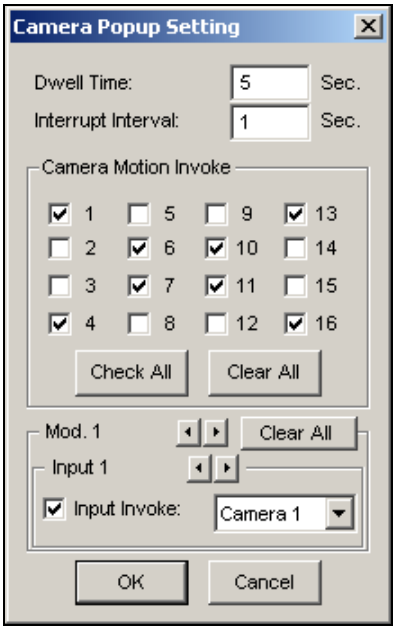


Figure 1-25

- **Dwell Time:** Specify the amount of time a pop-up camera window to remain in the foreground.
- **Interrupt Interval:** This feature is useful when more than one camera is set for pop-up notification. If cameras are all activated at the same time, specify the interrupt interval here would allow you to set the amount of time between camera pop-ups.
- **Camera Motion Invoke:** Choose which camera you wish to have auto pop-up on motion-triggered event. (Use the **Mask Filter function in camera settings, Figure 1-8,** to adjust the area of activation).
- **Input Invoke:** Use this function to have an I/O device trigger the auto pop-up.

Configuring Object Counting

Object counting in GV-System provides bi-directional counting of objects under the surveillance area. When defined, it could count any objects, such as people, vehicles, animals, etc.

1. Click the **Configure** button, and then select **Counter Application Setting**. This brings up the following dialog box.

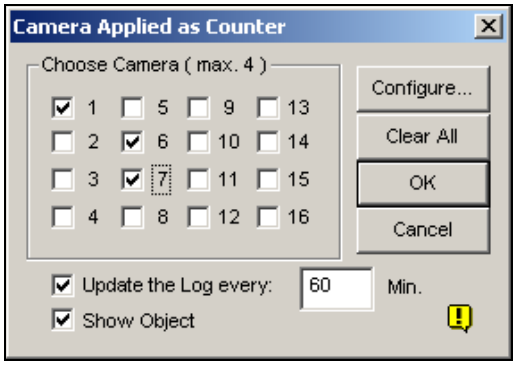


Figure 1-26

2. Select the desired cameras for the counter application.
3. Click the **Show Object** item in the lower of the window to put a rectangle around the object being tracked.
4. Click the **Configure** tab to open the Counter Application Setting dialog box, shown as follows. This is where you define the counter to count target objects.

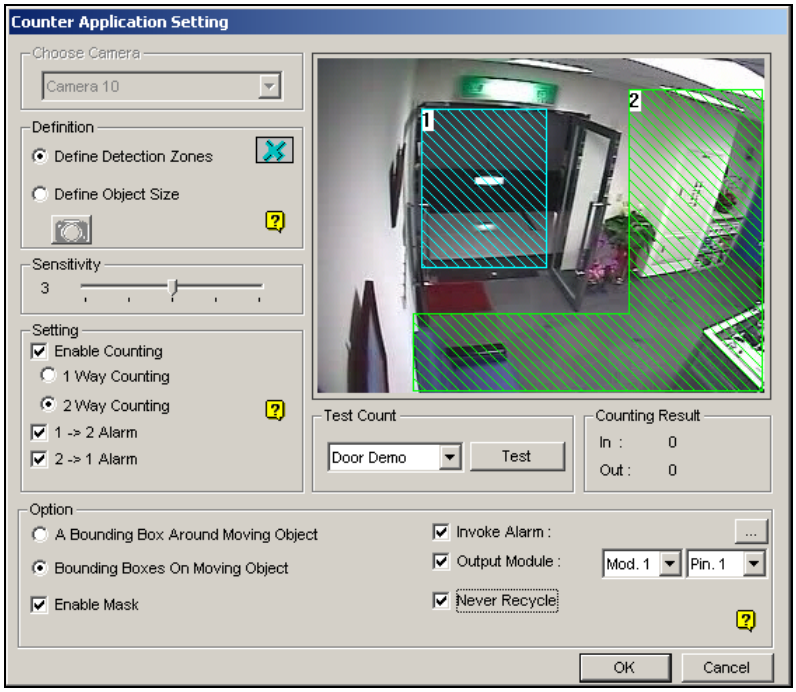


Figure 1-27

5. In the Choose Camera section, select a camera from the drop-down list for setup.

6. In the Definition section, there are two options:
   - **Set Detection Zones:** Use the mouse to outline detection regions on the video image. Number 1 is for region 1; number 2 for region 2. Defining multiple regions 1 and 2 is practicable. Clicking the **delete (blue X icon)** button will clear all defined regions.
   - **Define Object Sizes:** Use the mouse to outline a region matching the normal size of the targeted object. If the video is playing, first click the **Snapshot** button to freeze the image before defining.

7. In the Setting section, the three options represent:
   - **Enable Counting:**

     1 Way Counting: When an object appears in region 1 and then enters into region 2, it will be counted as 1 in.

     2 Way Counting: When an object appears in region 1 and then enters into region 2, it will be counted as 1 in, and when an object appears in region 2 and then enters region 1 it will be counted as 1 out.
   - **1→2 Alarm:** When an object enters from region 1 to region 2, the event will be recorded as "Intruder" in System Log for later retrieval.
   - **2→1 Alarm:** When an object enters from the defined region 2 to region 1, the event will be recorded as "Intruder" in System Log for later retrieval.

8. In the Option section, select how you want to highlight the detected object. If **Enable Mask** is enabled, masks will be displayed on the detection regions.

9. If the alarm settings in step 7 are selected, the following options will be enabled:
   - **Invoke Alarm:** Activate the computer noise alarm when an object enters a defined region. Click the button next to the item to assign a wav sound file.
   - **Output Module:** Enable an installed output device when an object enters a defined region. Assign the output module and pin number.
   - **Never Recycle:** When the item is checked, the alarm-triggered events won't be recycled even when disk space is full.

10. To test your settings of counting, select **Live** from the drop-down list, and then click the **Test** button. Notice how the number changes in the Counting Result section when objects pass through the detection regions. There are three options in the drop-down list. **Live** tests your current settings; **Door Demo** and **Traffic Demo** are pre-recorded events, showing how the application counts objects in two actual DVR examples.

Mapping PTZ Cameras

This option assigns a PTZ camera to its corresponding camera channel for either the local or the remote applications. For local applications, see *Auto Switching PTZ Control Panels* on page 46.

For remote applications, this option will let you control PTZ cameras by the WebCam or Center V2 server. For the setup, add at least one PTZ camera to the system. Click the **Configure** button and select **Camera Mapping PTZ Dome** from the menu to bring up the following dialog box. Select a camera channel by using the camera tabs in the upper part. Select the PTZ camera connected to the selected channel from the Device drop down list. If you have two identical PTZ cameras set in the system, you may use the Address drop down list to choose the one with the correct address. Click **OK** to apply the settings.

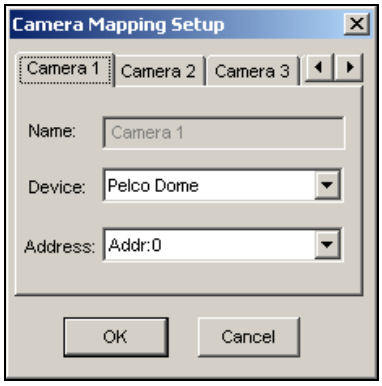


Figure 1-28 *Camera Mapping Setup*

Setting Up Password

The password setup allows you to assign permission and rights to users. You can create up to **1,000** passwords. The system will control and restrict access to system resources based on the permission and rights associated with each user account. Only Supervisor account level is pre-set with the access to the Password Setup function. Click the **Configure** button, point to **Password Setup** and select **Local Account Edit** to display the following window.

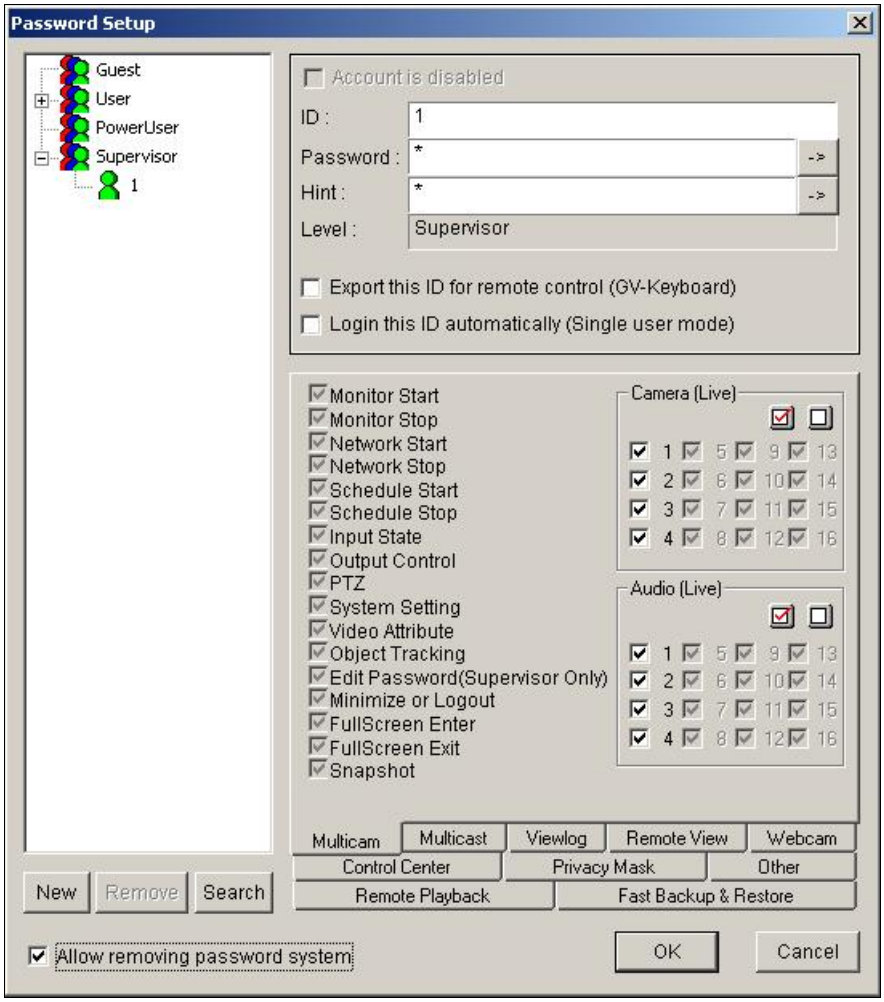


Figure 1-29

Adding a new user:

1. Click the **New** button at the lower-left hand corner to bring up the New Account dialog box.

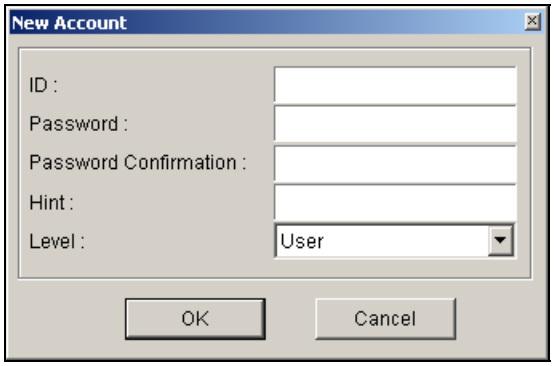


Figure 1-30

2. Enter the user's **ID** name and **password**. Re-enter the same password in the Password Confirmation field.
3. Give a **Hint** (optional) that would remind you of the password.

4. Select the user's authorization level: **Supervisor**, **PowerUser**, **User** or **Guest**. By default, users belonging to the Supervisor level have full rights over GV-System settings. PowerUsers have the same permission and rights as Supervisors, except that they cannot edit user information and delete the password system (described later). Users belonging to the User level are restricted to all system settings, and have only limited access to certain functions. Users in the Guest level can only view videos.
5. Click **OK** to add the user.

Editing an exiting user: (Only supervisors are allowed to do it.)

1. Select a user from the user list to display its properties. Or, right click on any of the user levels (User, PowerUser, Supervisor), and then select **Find Specific Account** for quick search. A valid password is required to edit a supervisor.
2. Edit the properties as required. Check the **Account Is Disabled** item if you wish to disable this user.

Three options you may also find in this dialog box:

- **Login this ID automatically:** Enabling this option allows auto login with this ID.
- **Export this ID for Remote Control:** This option allows the export of users IDs for the remote control. When it is checked, you can see the designated ID in the drop-down menu of login. (Note: For the operation of remote control, the password should be restricted for digits.)
- **Allow removing password System:** This option lets users remove the ID and password database from GV-System. To do this, select this option (only Supervisor level users can make the selection), and then find **PassUnInStall** in the system folder. Click the application, and a message prompts to you for confirmation. Click **Yes** to remove the entire ID and password from GV-System.

Note: If the **Allow Removing Password System** option is not checked, the loss of passwords will require the reinstallation of Windows and the reset of passwords.

Sending Alerts thru E-mail Accounts

It is possible to send alerts through E-mail accounts on motion or I/O triggered events. You may first set up your server to handle the sending of alerts. Follow these steps to set up an E-mail account:

1. Click the **Configure** button, and then select **E-Mail Setup**. This brings up the following dialog box:

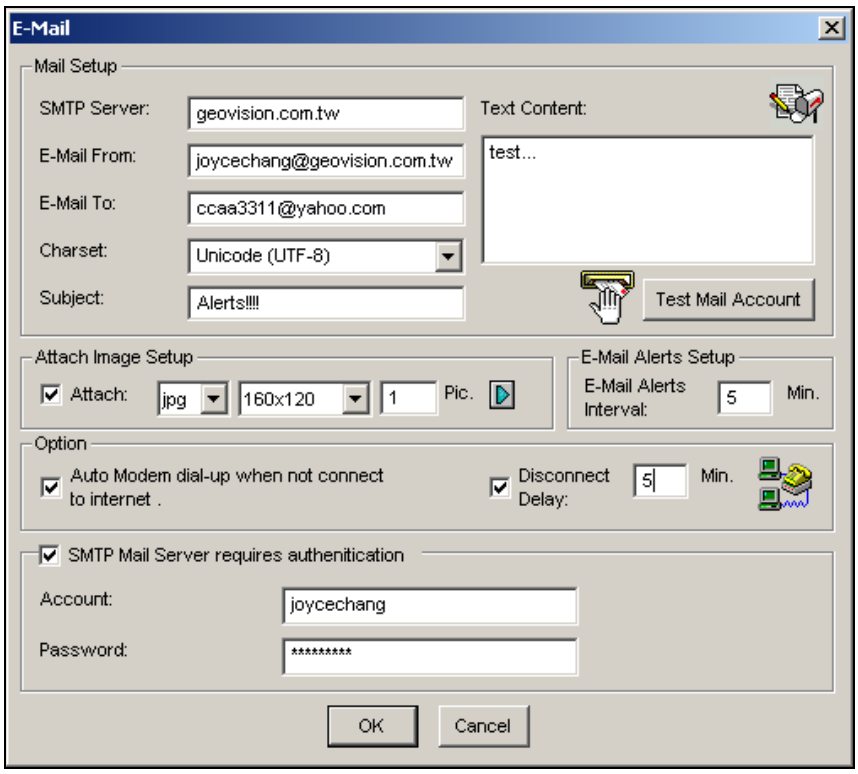


Figure 1-31

2. In the Mail Setup section, set up following fields:
   - **SMTP Sever:** Enter your mail server name.
   - **E-Mail From:** Enter the reply E-mail address (optional).
   - **E-Mail To:** Enter the E-mail address you want to send alerts to.
   - **Charset:** Select the character-set to be used when sending mail via the system.
   - **Subject:** Enter a subject that would come with the alert message.

3. You have the option to attach an image with the alert when sending mail. Click to enable the option. Select image format from the drop-down list, and the image size.
4. In the **Pic.** Field, enter how many snapshots (max. 6) you wish to receive in an event.
5. Press the Arrow button if you wish to tag the snapshot with Time/Date, Camera number, and Location name. Select **Transparent** makes the tag background transparent, and **Color Box** is for you to choose your text color.
6. Click the **Test Mail Account** button to test if E-mail function is working correctly. You may click **OK** here or go on to set up with following options:

[Email-Alerts Setup] If the camera continues to detect motion then the GV-System will continuously send E-mails to you. You may specify the interval between E-mails. The default interval is 5 minutes (configurable from 0 to 60 minutes); therefore if motion lasts for more than 15 minutes it means you will receive 3 E-mails. If motion lasts for less than 5 minutes, then you will receive only one E-mail.

[Option] Select **Auto Modem dial-up** to dial-up automatically when the system is instructed to send E-mail alerts. The **Disconnect Delay** disconnects the system from Internet after the set number of minute(s) (from 0 to 30 minutes).

[SMTP Mail Server requires authentication] If the SMTP mail server needs authentication, select this item and enter your account name and password.

Choosing Video Source

Video Source sets the video standard of your system: NTSC or PAL. Click the **Configure** button, and then select **Video Source** to display the following dialog box.

[Video Setup] Determines a video standard for your system.

- **Video Standard:** Select a video standard used in your country.
- **Video Resolution:** Consider your priority in image quality or CPU usage before making a selection.
  - For NTSC, the image quality and CPU usage from the highest to the lowest is: 720x480, 720x480 De-interlace, 720x240, 640x480, 640x480 De-interlace, 640x240, 320x240.
  - For PAL, the image quality and CPU usage from the highest to the lowest is: 720x576, 720x576 De-interlace, 720x288, 640x480, 640x480 De-interlace, 640x240, 320x240.

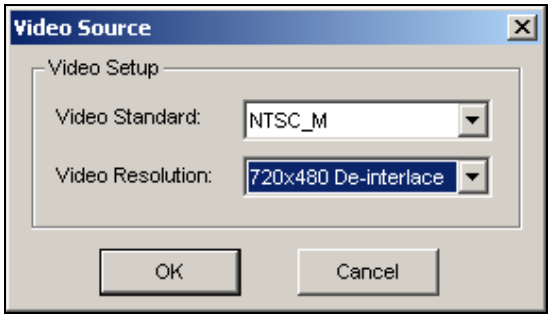


Figure 1-32

Optimizing System Performance

Click the **Configure** button and select **Performance** from menu. This function is only available to GV-650, GV-750, GV-800, GV-900, and GV-1000.

- **Preview Master:** The display speed increases because the system resource will focus on the monitoring after click Preview Master.
- **Both Master:** Both display and recording speed is at the average because the system resource is allocated equally.
- **Record Master:** The recording speed increases because the system resource will focus on the recording after select the Record Master.

Adjusting Video Attributes

This feature lets you adjust video attributes to get the best picture. Click the **Configure** button and select **Video Attributes** to have two selections: **Standard** and **Advanced**.

Standard Video Attributes

Adjust image quality by moving the slide bars to the desired values. Click **Default** to apply default values. Click the **left and right arrow** buttons to select a desired camera for setup. Or, click the **finger** button to apply the displayed settings to all cameras.

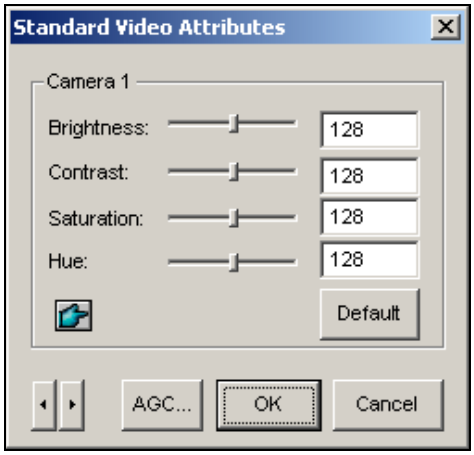


Figure 1-33

AGC (Auto Gain Control): Adjusting AGC help boost weak video signals or reduce strong video signals, and gives optimized image quality. The adjustment could be done manually or automatically. When a video signal is weak, for example, due to distance, adjusting the brightness or contrast of the video source will NOT help the situation. Adjust AGC and see the difference. (Depending on the model purchased, this feature may or may not be available.)

In the Auto Gain Control window, click **Auto** for auto adjustment, click **Default** to apply default values, or click **Apply** to apply the displayed settings. The default value is set to 1.15V (115), but you may move the slider bar to adjust between 0.3V (30) or 2.5V (250).

Advanced Video Attributes

This feature lets you know the image size after quality and image adjustment.

[Mulitcam]

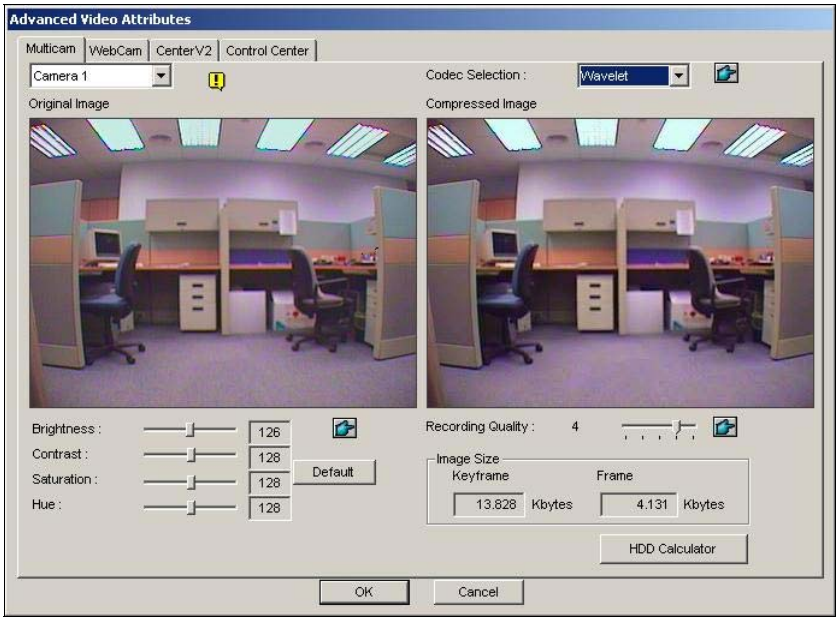


Figure 1-34

- **Camera drop-down list:** Select a camera channel for the application.
- **Codec Selection:** Select a desired type of compression.
- **Image Adjustment (Brightness, Contrast, Saturation, Hue):** Move the slide bars to adjust image attributes. Click the **finger** button to apply the displayed values to all cameras.
- **Recording Quality:** Move the slide bar to increase or decrease the picture quality. Click the **finger** button to apply the selected quality to all cameras.
- **Image Size: Keyframe** indicates the compressed file size while **Frame** shows the partly compressed file size after quality and image adjustment.

Note: The smaller image size means higher video compression and smaller file size, thus extending the recording capacity.

[WebCam, Center V2, Control Center]

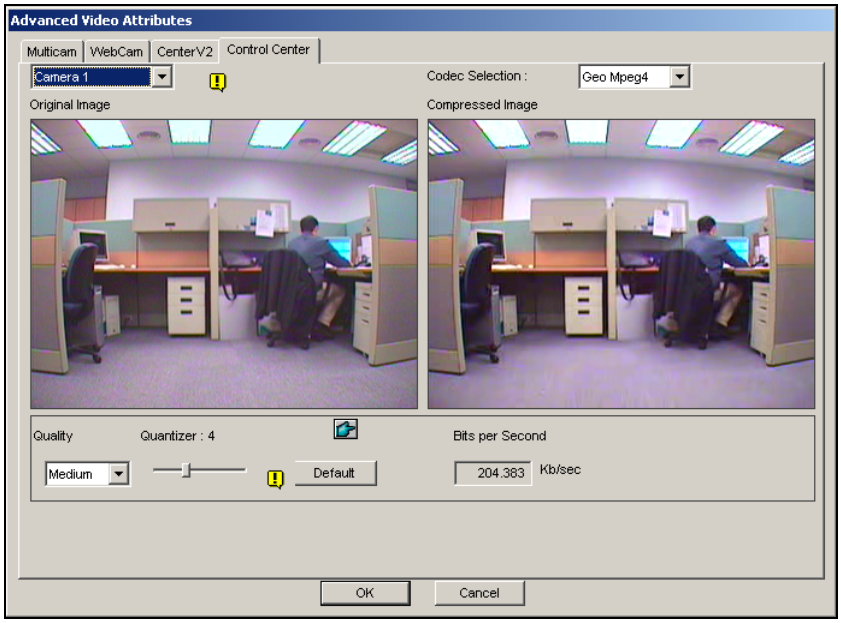


Figure 1-35

- **Quantizer:** The bigger the Quantizer, the poor the image quality.
- **Quality:** The default Quantizer for High is 2, for Medium is 4 and for Low is 6. The adjustment rules between Quantizer and Quality is: Quantizer for High < Quantizer for Medium < Quanitzer for Low.
- **Bits per second:** Indicates the data transmission speed after quality adjustment.

Switching to Full-Screen View

For full-screen display, first select the **Enable Directdraw Overlay** option (Figure 1-3). Click the **Configure** button, and then select **Full Screen** to switch to full screen. Right-click on the full screen and select **Toggle Full Screen** to switch back to normal view screen. Alternatively, press **[F]** on the keyboard to toggle between full-screen view and normal screen view.

Listening to Live Audio

Choose the **Configure** button, point to **Wave-out**, and then select the audio channel you wish to listen to.

Deactivating Video Lost Beep

To stop a beep noise when any of videos lost, click the **Configure** button and select **Disable Video Lost Beep**.

Start/Stop Monitoring

Select the **Monitor** button and select to start or stop all or individual camera monitoring. Camera Name at the upper left corner of the view screen changes from yellow to red color when motion detected. (Blinking represents the camera is detecting motion). **[F7]** is the shortcut key of this operation.

Tip: To take a snapshot of the current frame, position your cursor over on the Camera Name. When the **Hand** button appears, click to open the Save As dialog box, shown as below. Save and tag the frame with Time/Date, Camera number, and Location name. Select **Transparent** will make the tag background transparent, and **Color Box** is for you to choose your text color.

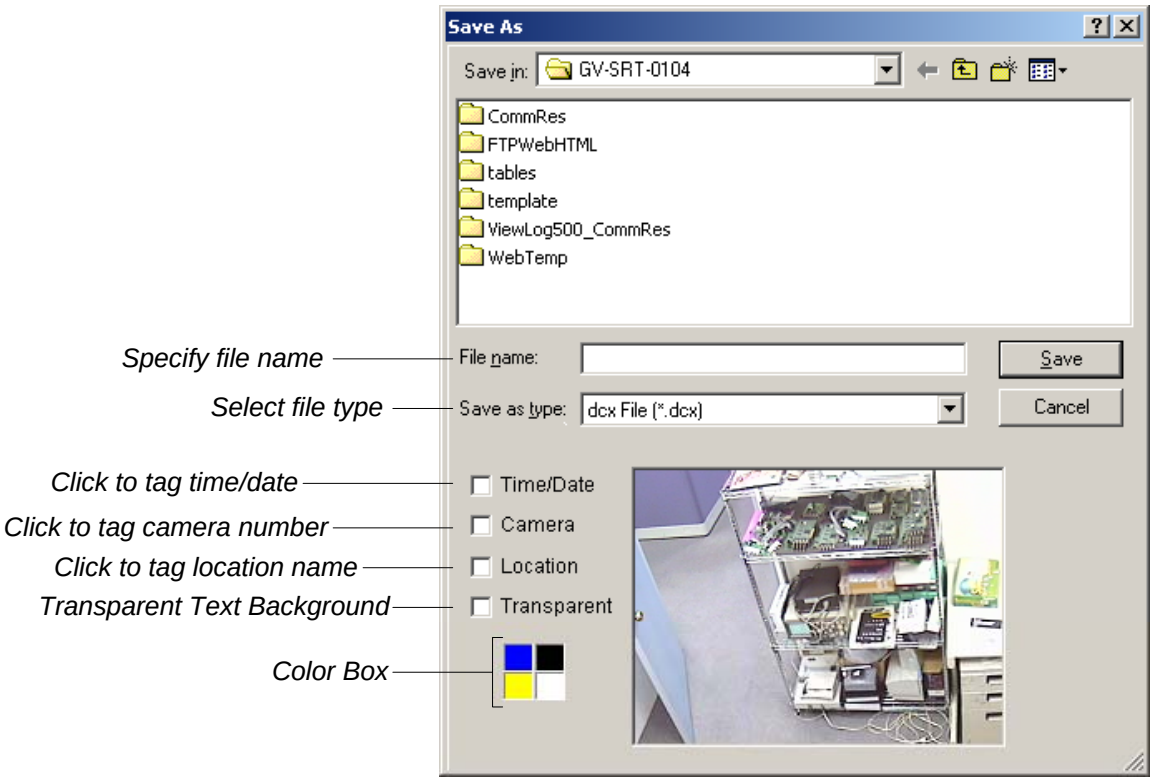


Figure 1-36

Playing Back Video Files

The **ViewLog** button is used for playing back video and audio files. This function is discussed in Chapter 4.

Instant Playback

You can instantly open ViewLog to trace the event(s) of a certain time length without interrupting the morning.

- To instantly play back the event(s) of one single channel, click on the **Camera Name**, and then select the time length.
- To instantly play back the events of all channels, click on the **ViewLog** button, select **Instant Play**, and then select the time length.

Time length choices include 10 seconds, 30 seconds, 1 minute and 5 minutes.

System Log

System Log displays detailed information about the GV-System and remote operation. This information is being saved in a database Access format for this can be a useful tool to Supervisor. To view the System Log, Click the **ViewLog** button, and then select **System Log** from the menu. This brings up the Live Log Brower viewer as shown below. The Log Browser viewer displays five type of event information. Use the control tab to switch between them. Click the **[...]** icon on the upper right corner to bring up Advanced Log Browser screen.

[Monitor] Displays information pertaining to motion and I/O events. Double click on the log list will allow you to view related video in ViewLog or Quick Search (depending on the video player you selected in the Activate System Log dialog box on page 38).

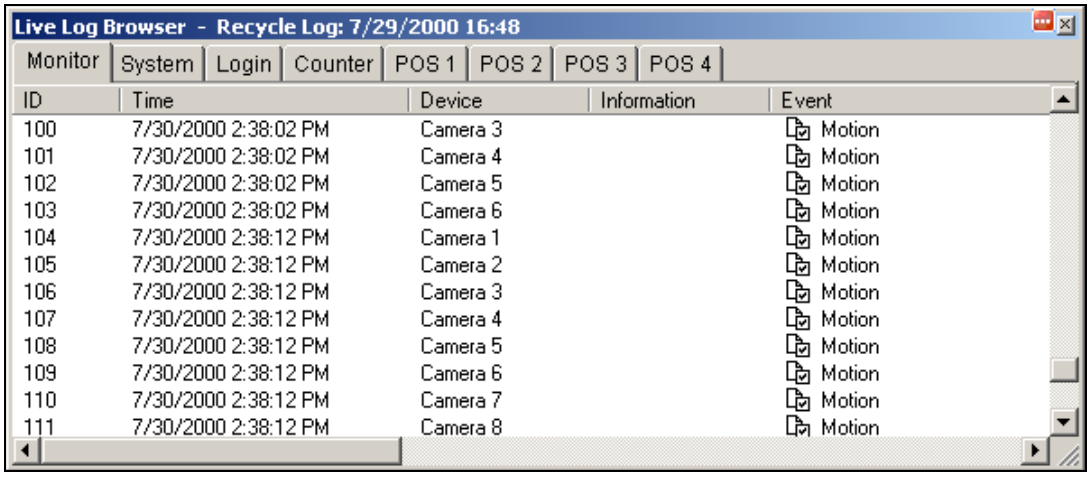

Live Log Browser - Recycle Log: 7/29/2000 16:48
Monitor
System
Login
Counter
POS 1
POS 2
POS 3
POS 4
ID
Time
Device
Information
Event
100 7/30/2000 2:38:02 PM Camera 3 Motion
101 7/30/2000 2:38:02 PM Camera 4 Motion
102 7/30/2000 2:38:02 PM Camera 5 Motion
103 7/30/2000 2:38:02 PM Camera 6 Motion
104 7/30/2000 2:38:12 PM Camera 1 Motion
105 7/30/2000 2:38:12 PM Camera 2 Motion
106 7/30/2000 2:38:12 PM Camera 3 Motion
107 7/30/2000 2:38:12 PM Camera 4 Motion
108 7/30/2000 2:38:12 PM Camera 5 Motion
109 7/30/2000 2:38:12 PM Camera 6 Motion
110 7/30/2000 2:38:12 PM Camera 7 Motion
111 7/30/2000 2:38:12 PM Camera 8 Motion

Figure 1-37

ID: This column shows the event ID number generated by the system.

Time: This column shows the time when a motion or I/O monitor event occurs.

Device: This column shows camera ID or I/O device associated with the event.

Information: This column shows the I/O module number

Event: These event messages mean:

- **Motion:** Appear if motion occurs in the associated camera.
- **Monitor Video Lost:** Appear if video lost occurs in the associated camera.
- **Monitor Video Resume:** Appear if video resume in the associated camera.
- **Signal On:** Appear if one of the input device connected to the associated I/O module are activated.
- **Signal Off:** Appear if one of the input device connected to the associated I/O module are terminated.
- **I/O error:** Appear if associated I/O module failed.
- **I/O resume:** Appear if associated I/O module resume to action.
- **Missing Object:** Appear if objects miss from a defined camera view.
- **Unattended Object:** Appear if unattended objects show up within a defined camera view.
- **Intruder:** Appear if there are objects entering a defined region.
- **Disk Full:** Appear if storage space is full.

[System] This function shows which functions are being enabled or disabled in the GV-System.

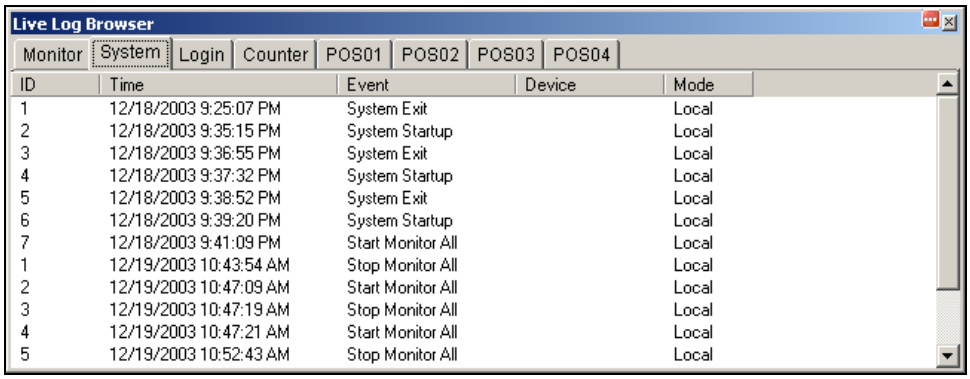

Live Log Browser
Monitor
System
Login
Counter
POS01
POS02
POS03
POS04
ID
Time
Event
Device
Mode
1 12/18/2003 9:25:07 PM System Exit Local
2 12/18/2003 9:35:15 PM System Startup Local
3 12/18/2003 9:36:55 PM System Exit Local
4 12/18/2003 9:37:32 PM System Startup Local
5 12/18/2003 9:38:52 PM System Exit Local
6 12/18/2003 9:39:20 PM System Startup Local
7 12/18/2003 9:41:09 PM Start Monitor All Local
1 12/19/2003 10:43:54 AM Stop Monitor All Local
2 12/19/2003 10:47:09 AM Start Monitor All Local
3 12/19/2003 10:47:19 AM Stop Monitor All Local
4 12/19/2003 10:47:21 AM Start Monitor All Local
5 12/19/2003 10:52:43 AM Stop Monitor All Local

Figure 1-38

ID: Displays the event ID number

Time: This column shows the time when system event occurs.

Event: This column shows the following messages when associated actions are taken.

- **Schedule Start /Stop:** Appear when a user starts or stops the monitoring schedule.
- **Auto Reboot:** Appears when the system performs auto rebooting function.
- **System Start / Exit:** Appear when a user starts or stops GV-System.
- **Start / Stop Monitor All:** Appear when a user starts or stops all cameras' monitoring functions.
- **Start / Stop Monitor**: Appear when a user starts or stops the individual camera's monitoring function. The camera number will appear in Device column.

- **IO Monitor Start / Stop:** Appear when a user starts or stops the individual I/O module's monitoring function. The I/O module number will appear in the Device column.
- **Modem Svr Start / Stop:** Appear when a user starts or stops GV-System's Modem Server.
- **TCP Svr Start / Stop:** Appear when a user starts or stops GV-System's TCP Server.
- **Multicast Svr Start / Stop:** Appear when a user starts or stops Multicast Server.
- **WebCam Svr Start / Stop:** Appear when a user starts or stops WebCam Server.
- **Connect to Center Start/ Stop:** Appear when GV-System connects or disconnects with the Security Center.
- **Twin Svr Start / Stop:** Appear when a user starts or stops Twin Server.
- **Connect to Center V2 Start / Stop:** Appear when GV-System logs in or out Center V2.
- **Connect to VSM Start/Stop/Net Down/ Net Resume:** Appear when GV-System logs in or out VSM; when the connection of both fails or resumes.
- **Connect to SMS Start/Stop/Net Down/Net Resume:** Appear when GV-System logs in or out the SMS server; when the connection of both fails or resumes.

Device: This column shows the individual camera number.

Mode: This column shows whether actions are being taken in local side or remote side.

[Login] This function shows whom and when has logged in and out from the GV-System and WebCam server.

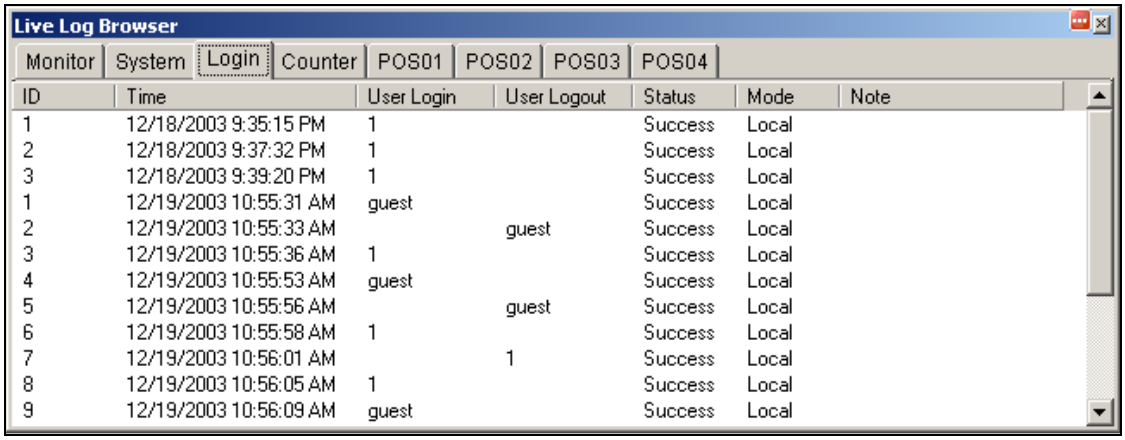

Live Log Browser
Monitor
System
Login
Counter
POS01
POS02
POS03
POS04
ID | Time | User Login | User Logout | Status | Mode | Note
1 | 12/18/2003 9:35:15 PM | 1 | | Success | Local
2 | 12/18/2003 9:37:32 PM | 1 | | Success | Local
3 | 12/18/2003 9:39:20 PM | 1 | | Success | Local
1 | 12/19/2003 10:55:31 AM | guest | | Success | Local
2 | 12/19/2003 10:55:33 AM | | guest | Success | Local
3 | 12/19/2003 10:55:36 AM | 1 | | Success | Local
4 | 12/19/2003 10:55:53 AM | guest | | Success | Local
5 | 12/19/2003 10:55:56 AM | | guest | Success | Local
6 | 12/19/2003 10:55:58 AM | 1 | | Success | Local
7 | 12/19/2003 10:56:01 AM | | 1 | Success | Local
8 | 12/19/2003 10:56:05 AM | 1 | | Success | Local
9 | 12/19/2003 10:56:09 AM | guest | | Success | Local

Figure 1-39

ID: Shows the event ID number

Time: This column shows the time when Login event occurs.

User Login: This column shows the ID of the login user.

User Logout: This column shows the ID of the logout user.

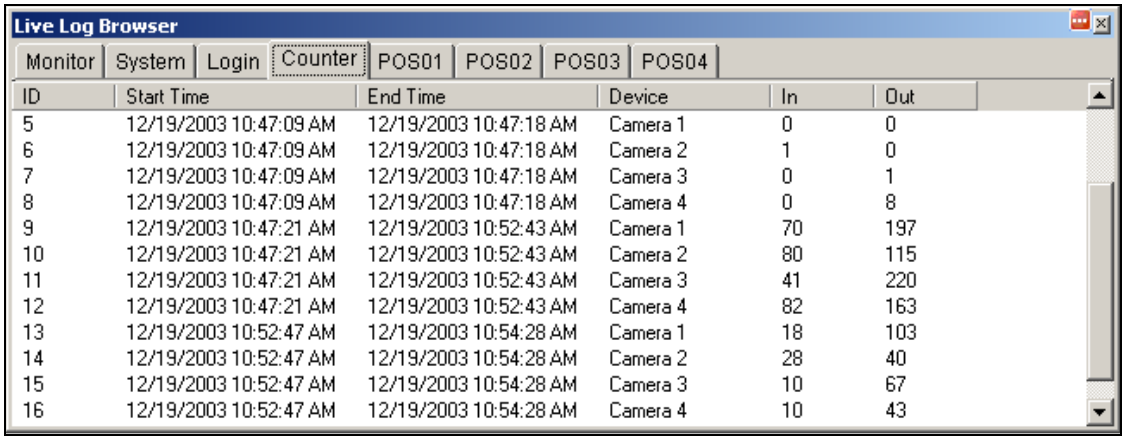
Status: This column shows whether login or logout attempts were successful or failed.

Mode: This column shows the following two messages:

- **Local:** Appear if a user login to or logout from the Main System.
- **WebCam (Mpeg4):** Appear if a remote client login to or logout from the WebCam server.

Note: This column shows the IP address of the client server.

[Counter] This function shows the information and result of GV-System's counter function.



ID	Start Time	End Time	Device	In	Out
5	12/19/2003 10:47:09 AM	12/19/2003 10:47:18 AM	Camera 1	0	0
6	12/19/2003 10:47:09 AM	12/19/2003 10:47:18 AM	Camera 2	1	0
7	12/19/2003 10:47:09 AM	12/19/2003 10:47:18 AM	Camera 3	0	1
8	12/19/2003 10:47:09 AM	12/19/2003 10:47:18 AM	Camera 4	0	8
9	12/19/2003 10:47:21 AM	12/19/2003 10:52:43 AM	Camera 1	70	197
10	12/19/2003 10:47:21 AM	12/19/2003 10:52:43 AM	Camera 2	80	115
11	12/19/2003 10:47:21 AM	12/19/2003 10:52:43 AM	Camera 3	41	220
12	12/19/2003 10:47:21 AM	12/19/2003 10:52:43 AM	Camera 4	82	163
13	12/19/2003 10:52:47 AM	12/19/2003 10:54:28 AM	Camera 1	18	103
14	12/19/2003 10:52:47 AM	12/19/2003 10:54:28 AM	Camera 2	28	40
15	12/19/2003 10:52:47 AM	12/19/2003 10:54:28 AM	Camera 3	10	67
16	12/19/2003 10:52:47 AM	12/19/2003 10:54:28 AM	Camera 4	10	43

Figure 1-40

ID: This column shows the event ID number

Start Time: This column shows the time when GV-System's counter function is activated.

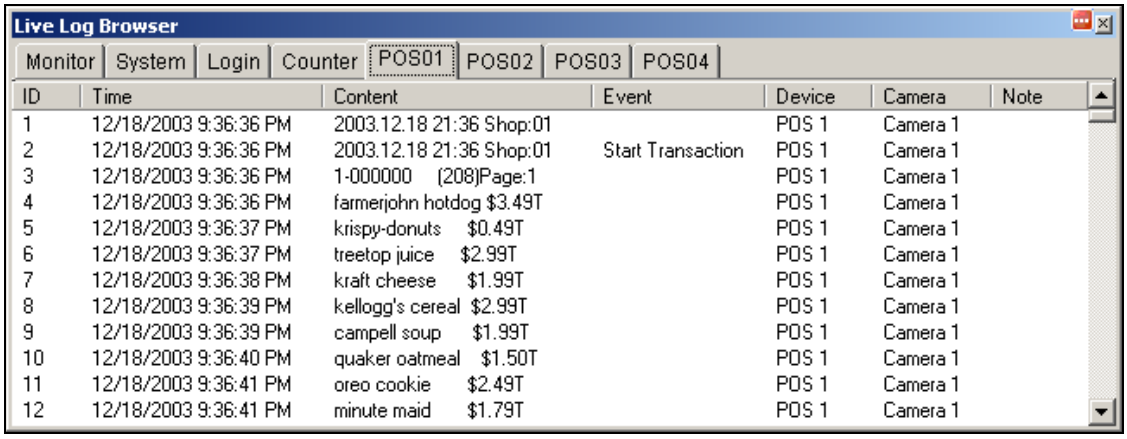
End Time: This column shows the time when GV-System's counter function is terminated.

Device: This column shows the camera that performs counter function.

In: This column shows the "In" result of GV-System's counter function.

Out: This column shows the "Out" result of GV-System's counter function.

[POS] This function shows the POS event information. Double click on the log list will allow you to view related video in ViewLog or Quick Search (depending on the video player you selected in the Activate System Log dialog box on page 22).



ID	Time	Content	Event	Device	Camera	Note
1	12/18/2003 9:36:36 PM	2003.12.18 21:36 Shop:01		POS 1	Camera 1	
2	12/18/2003 9:36:36 PM	2003.12.18 21:36 Shop:01	Start Transaction	POS 1	Camera 1	
3	12/18/2003 9:36:36 PM	1-000000 (208)Page:1		POS 1	Camera 1	
4	12/18/2003 9:36:36 PM	farmerjohn hotdog $3.49T		POS 1	Camera 1	
5	12/18/2003 9:36:37 PM	krispy-donuts $0.49T		POS 1	Camera 1	
6	12/18/2003 9:36:37 PM	treetop juice $2.99T		POS 1	Camera 1	
7	12/18/2003 9:36:38 PM	kraft cheese $1.99T		POS 1	Camera 1	
8	12/18/2003 9:36:39 PM	kellogg's cereal $2.99T		POS 1	Camera 1	
9	12/18/2003 9:36:39 PM	campell soup $1.99T		POS 1	Camera 1	
10	12/18/2003 9:36:40 PM	quaker oatmeal $1.50T		POS 1	Camera 1	
11	12/18/2003 9:36:41 PM	oreo cookie $2.49T		POS 1	Camera 1	
12	12/18/2003 9:36:41 PM	minute maid $1.79T		POS 1	Camera 1	

Figure 1-41

ID: This column shows the event ID number.

Time: This column shows the time when POS event occurs.

Content: This column shows the action taken in the POS device.

Event: This column shows the following messages.

- **Start Transaction:** Appear when sales transaction starts.
- **Stop Transaction**: Appear when sales transaction ends.

- **Void Transaction:** Appear if an item is being void from the sales transaction.
- **Cash Drawer Open:** Appear if the cash drawer is opened.
- **Filter 1-15:** Appear if the sales transaction matches the defined condition 1 to 15.

Note: This column is currently not being used.

Recording Schedule

You can program recording, I/O devices, and Center V2 services to turn on and off at specific time each day. Click the **Schedule** button and select **Schedule Edit** to display the following window.

Note: It's necessary to edit Center V2 schedule once you activate other schedule settings; otherwise, the connection to Center V2 will be stopped automatically after 15 minutes.

The window has three major tabs:

- **Video Schedule:** A schedule starts the surveillance system automatically.
- **I/O Schedule:** A schedule starts I/O surveillance automatically.
- **Center V2 Schedule:** A schedule starts the connection to Center V2 services automatically.

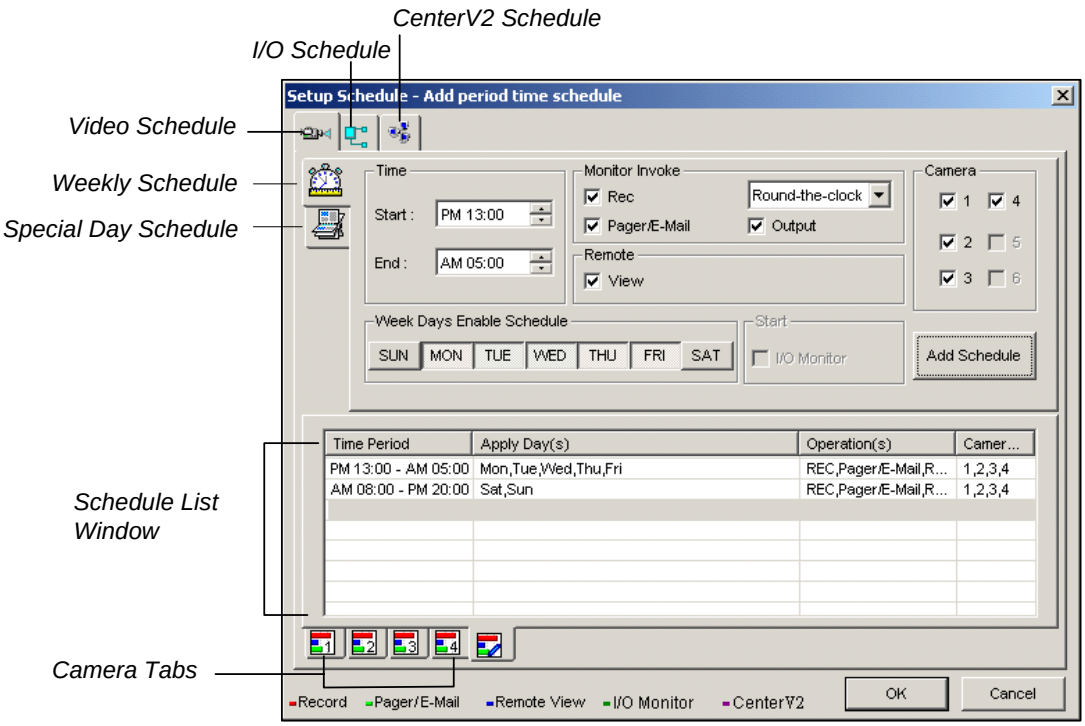


Figure 1-42

Video Schedule

1. Set your surveillance preferences:

   [Time] Enter the starting and ending time of the schedule.

   [Monitor Invoke] Sets alert methods on motion detection.

   - **Rec:** Records while monitoring. From the drop-down list, select to record video by Motion Detect or Round-the-Clock.
   - **Pager/E-Mail:** Sends pager or e-mail alerts on motion detection.
   - **Output:** Triggers the corresponding I/O devices on motion detection. To set up I/O devices, see *Adjusting Individual Camera* on page 10.

   [Remote] Sends the triggered images to the remote applications (WebCam, MultiView or RemoteView).

   [Week Days Enable Schedule] Select days for the schedule.

   [Start] Only enabled in I/O Schedule.

   [Camera] Applies the settings to selected cameras.

2. Click the **Add Schedule** tab to apply above settings. The set schedule will display on the Schedule List Window.
3. Repeat above steps to set up more schedules.

Clicking separate Camera tabs, you will see the set schedule is displayed in different color bars:

- **Red**: Recording enabled
- **Green**: Pager/E-mail notification enabled
- **Blue**: System will send videos to Remote View
- **Jade:** I/O monitor enabled
- **Purple:** Center V2 schedule enabled.

To modify a schedule, highlight the desired schedule in the Schedule List window, and then press the **Modify Schedule** button to make changes.

To delete a schedule, highlight the desired schedule in the Schedule List window, and the press the **Delete** key on the keyboard.

Special Days Schedule

1. Click the **Special Day Schedule** tab.
2. All settings are the same as those in Video Schedule, except the following section. Click the drop-down list and select a date from the pop-up calendar. Click **Apply** to add the date to the schedule.

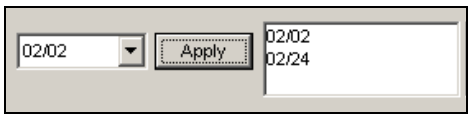


Figure 1-43

I/O Schedule

Set up a schedule to activate the monitoring of I/O devices automatically. All settings are the same as those in Video Schedule, except the following section. After setting up scheduled time and dates, select the **I/O Monitor** option to activate the schedule.

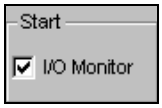


Figure 1-44

Center V2 Schedule

Set up a schedule to connect to Center V2 services automatically. All settings are the same as those in Video Schedule, except the following section. After setting up scheduled time and dates, select the **Center V2** option to activate the schedule. For details on Center V2, see Chapter 9.

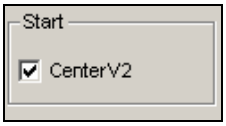


Figure 1-45

PTZ Control Panel

PTZ control panel is used to control PTZ camera operations, camera presets, and magnification functions. This control panel will not appear, unless at least one PTZ camera is connected to the system. Follow these steps to add PTZ cameras to the system:

1. Click **Configure** button, and select **System Configure**.
2. In the PTZ Control section, select **PTZ Device Setup** to enable the camera drop-down list.
3. Select the make and model from the list, and press the **PTZ Control** button to bring out the camera setup dialog box (slightly different for other camera models).
4. In the dialog box, select **Activate**. This is important! Without this step the PTZ camera will not be added to system.
5. Click **OK** and then go back to main screen. Now you should see **PTZ Control** button on main screen. Click the button to bring out the on-screen control panel, shown as follows:

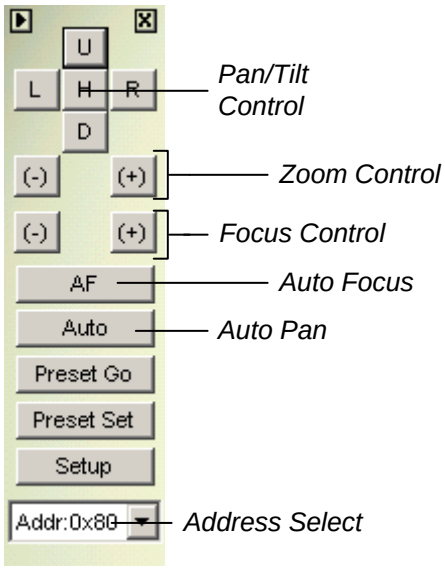


Figure 1-46

- **Auto Pan:** Allows camera to pan back and forth continually among preset points.
- **Preset Go:** Moves camera to the preset position.
- **Preset Set:** To set preset positions for the camera.
- **Address:** Specify address of your camera.

Note: Each dome will need to be addressed correctly. Refer to the dome manufacturers' documentation for details.

Auto Switching PTZ Control Panels

The function allows the corresponding PTZ control panels to be called up automatically when you switch to different PTZ camera screens. To enable the function, follow the steps below:

1. Click the **Configure** button, and then select **System Configure** to display the System Configure window.
2. In the PTZ Control section, click the **Arrow** button, point to **PTZ Panel Switch** and click Auto.

Figure 1-47

3. When the Camera Mapping Setup window appears (see Figure 1-28), specify the brand name and hardware address of each PTZ camera. Then click **OK** for the application.

Touch Screen Support

The GV-System offers three types of control panels with touch screen support: PTZ Control Panel, I/O Control Panel and Touch Screen Panel.

PTZ and I/O Control Panel

This feature gives you the option of a large PTZ and I/O control panel with touch screen support. To open the panel, follow the steps below.

1. Click the **Configure** button and select **System Configure** to display the System Configure window.
2. In the PTZ Control section, click the **Arrow** button, point to **PTZ/IO Panel**, and check **Large**.

Figure 1-48

Touch Screen Panel

The touch screen panel allows you to switch to ViewLog and full screen by the touch of a finger. To open the panel, follow the steps below:

1. Click the **Configure** button, select **Tool Kit**, point to **Touch Screen Panel** and then select **Panel Setup** to display the following window.

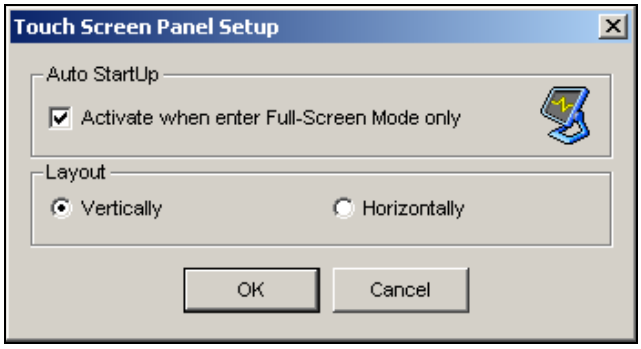


Figure 1-49

[Auto Startup] Launch automatically the panel when the full screen view is applied.

[Layout] Choose a vertical or horizontal panel.

2. Click **OK** for the above settings.
3. Click the **Configure** button, select **Tool Kit**, point to **Touch Screen Panel** and then select **Panel Activate** to open the panel.
4. An information window indicating date, time, and storage space will appear at the upper left corner of the screen. Right click it to open the touch panel as shown below.

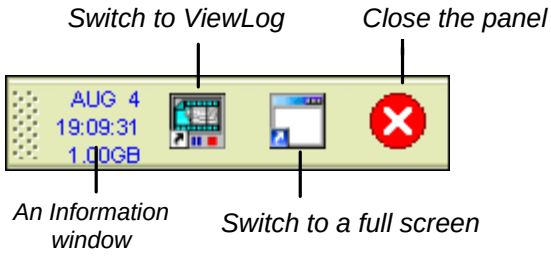


Figure 1-50

Note: You can move the touch screen panel anywhere on the screen by dragging it.

Retrieving Images Using Object Index

The feature allows you to view the very first frame of a *continuous* movement in a video stream. With Live Object Index, you may view the most recent 50 frames captured. With Object Index Search, you may easily locate a desired event and instantly play it back by double-clicking on the image frame.

Object Index Setup

You can select up to 4 cameras to view live video frames.

1. Click the **Configure** button, and then select **Object Index/Monitor Setup**. The Camera Applied Object Index/Monitor dialog box appears.
2. Check the desired cameras for the application.
3. Click the **Configure** button to display the Video Object Setup window.

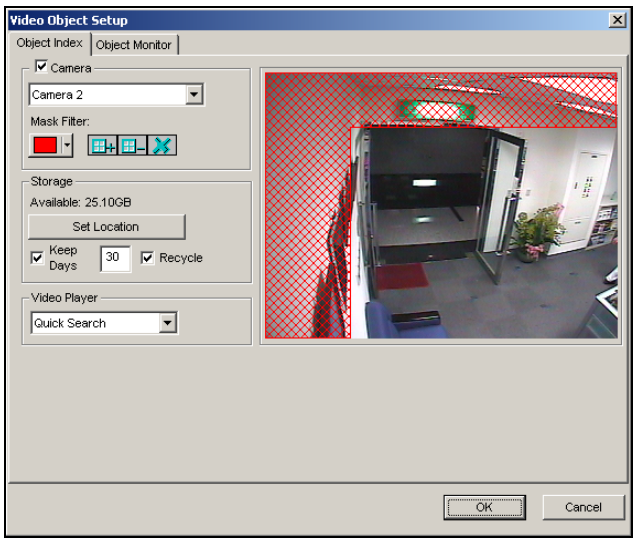


Figure 1-51 *Video Object Setup for Object Index*

- **Camera:** Select the camera you wish to configure from the drop-down menu.
- **Camera Enable:** Check to enable the selected camera for configuration.
- **Mask Filter:** Use the mouse to outline a mask area where motion will be ignored.
- **Set Location:** Click to assign a path to save the file.
- **Keep Days:** Check the item and specify the days to store the files, from 1 day to 999 days.
- **Recycle:** When both Keep Days and Recycle are selected, the system applies whichever condition comes first. For example, if storage space is lower than that is required to hold the days of data specified in Keep Days, recycle comes first.
- **Video Player:** Select a viewer ViewLog or Quick Search to play back video files.

Note: Minimum storage space required for Object Index is 500MB.

Live Object Index

After configuring Object Index, you can start to view the most recent frames captured, with 50 frames at most.

1. Start camera monitoring.
2. Click the **ViewLog** button, and then select **Live Object Index** to display the Live Viewer window.

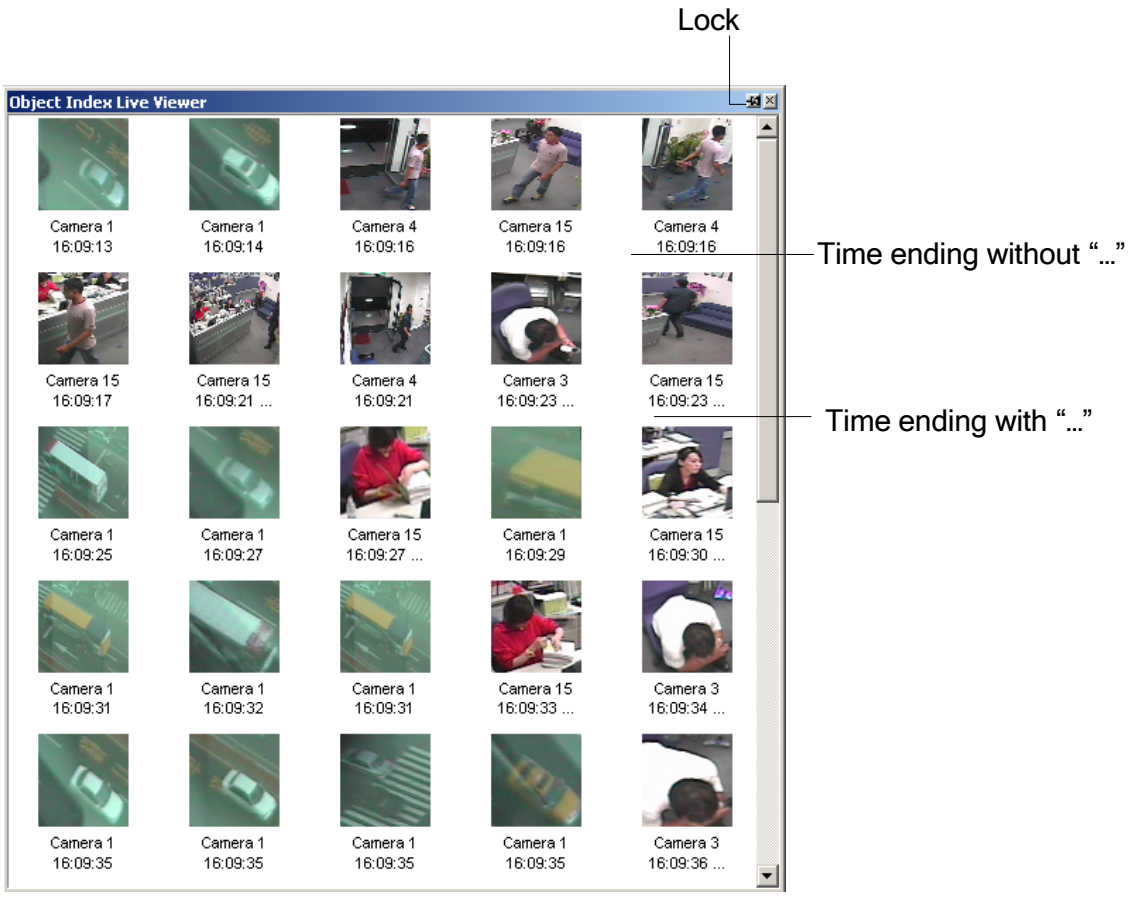


Figure 1-52

The controls in the Live Viewer window:

- **The Lock button:** Click to pause the updating process.
- **Time ending without "…":** This means the file is a complete one and can be played back with the ViewLog or Quick Search player. Double click the file to play it back.
- **Time ending with "…":** This means the video can't be played back since the recording is still in process.

Object Index Search

You can locate frames within selected cameras and a specific time frame.

1. Click the **ViewLog** button, and then select **Search Object Index** to display the following search window.

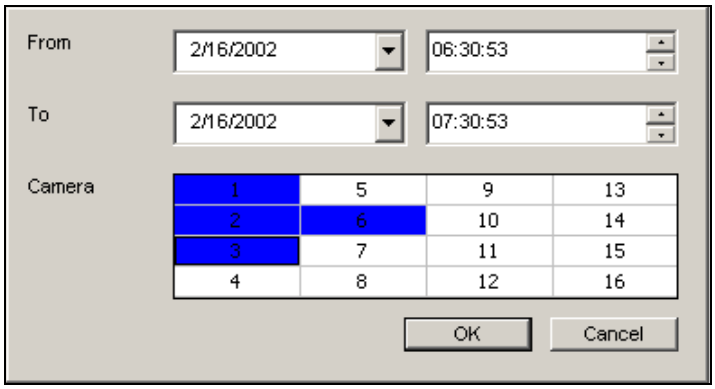


Figure 1-53 *The Search Window*

2. Specify a time frame and cameras, and then click **OK** to start searching. The following window will be called up.

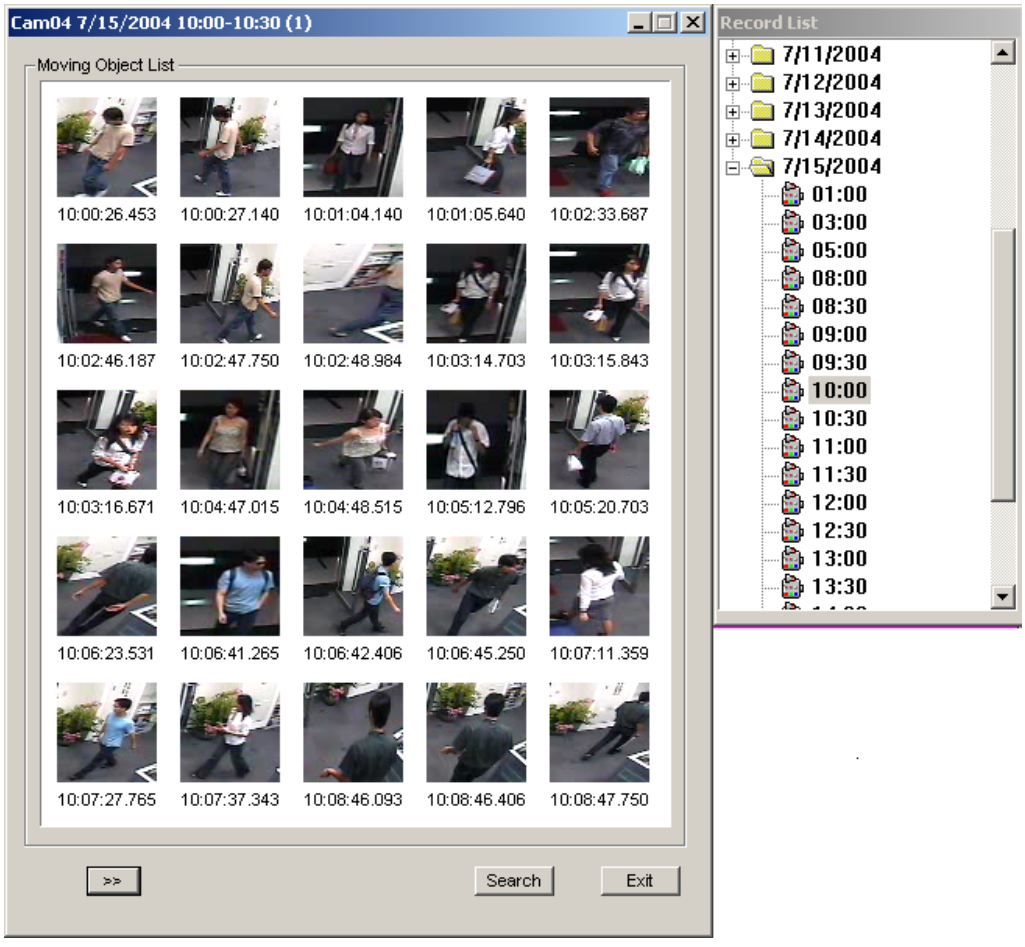


Figure 1-54 *The Moving Object List Window (left) and the Record List (right)*

[The Record List] The list contains the search results. Double click a camera folder to display all found files. Click one time-segment file (e.g. 10:00) to open its included frames in the Moving Object List window.

[The Moving Object List window]

- **Frames:** Double click any frame in the window to play back its video file with the Viewlog or Quick Search player.
- **:** Click the **Next Page** button for the next page.
- **Search:** Click the button to launch the search window.
- **Exit:** Click the button to close the window.

Note: Every time segment is a 30-minute interval, as shown in Record list in Figure 1-54.

Detecting Unattended and Missing Objects

The Object Monitor program can detect any unattended and/or missing object within the camera view by highlighting its location.

Detecting Unattended Objects

To detect any unattended objects within the camera view, follow the steps below:

1. Click the **Configure** button, and then select **Object Index/Monitor Setup** to display the Camera Applied Object Index/Monitor window.
2. Check the desired cameras for the application (The checked cameras will also be applied for the settings of Object Index).
3. Click the **Configure** button to display the Video Object Setup window (see *Object Index*, Figure 1-51.)
4. Click the **Object Monitor** tab in the upper part to display the following window.

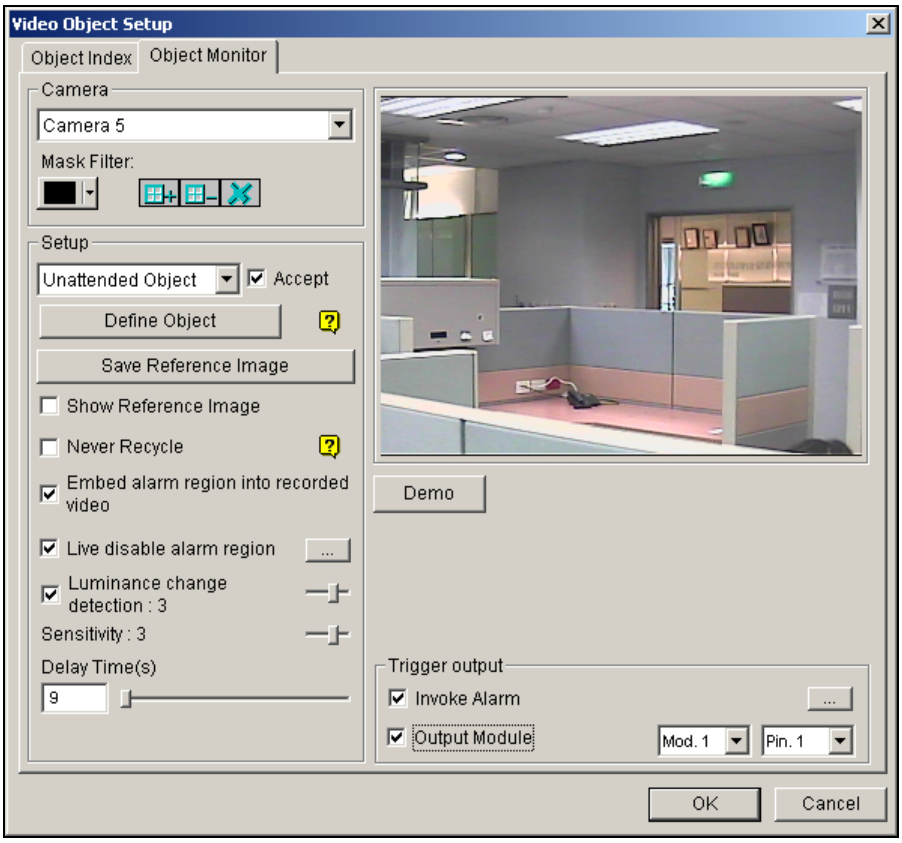


Figure 1-55 *Object Monitor*

5. In the Camera field, select a desired camera for setup.
6. Select **Unattended Object** from the drop-down list.
7. Click the **Accept** check box to make other options available.
8. Use the **Mask Filter** function to ignore any motion detection within a certain area if necessary.
9. Click the **Define Object** button.
10. Use the mouse to outline the max and min detection regions separately on the screen. Every time when finishing an outlining, you will be prompted to select **Maximum Size** or **Minimum Size**. See the illustration below.

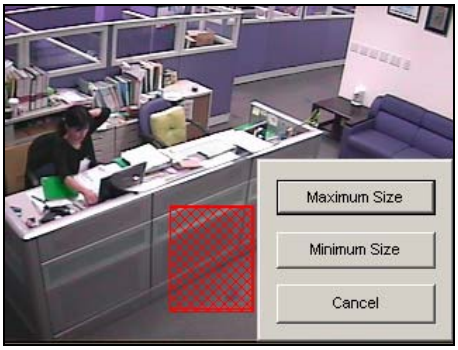


Figure 1-56 *Defining the min. and max. detection size*

11. Click the items of **Show Max** and **Show Min** in the lower of the window one by one to check your defined sizes.
12. Click the **Done** button to finish the defining.
13. Click the **Save Reference Image** button to save the image as a reference view.
14. To set up other options, see *Other controls in the Video Object Setup window* on page 67.
15. Click the **OK** button to apply the settings and close the window.
16. Start camera monitoring for the application.

When an unattended object appears and remains stationary for 9 seconds, its location will be highlighted, the selected alarm and output will be activated, and the event will be recorded in System Log for later retrieval.

Detecting Missing Objects

To detect any object missing from the camera view, follow the steps below:

1. Follow the step 1 to 4 in the above *Detecting Unattended Objects* section to display the Video Object Setup window. Refer to Figure 2-9.
2. In the Camera field, select a desired camera for configuration.
3. Select **Missing Object** from the drop-down list.
4. Click the **Accept** check box to make other options available.
5. Click the **Define Object** button.
6. Use the mouse to outline regions on the object(s) you want to detect. It is recommended to outline several regions within the object(s) to increase detection sensitivity. Notice that the outlined regions should not be larger than the object(s). Every time when finishing an outlining, you will be prompted to select **Add Region**. See the illustration below.

Figure 1-57 *Outlining regions on objects*

7. Click the **Done** button to finish the defining.
8. Click the **Save Reference Image** button to save the image as a reference view.

9. To set up other options, see *Other controls in the Video Object Setup window* below.
10. Click the **OK** button to apply the settings and close the window.
11. Start camera monitoring for the application.

When any object, which you have outlined the regions for, disappears from the camera view for 3 seconds, its location will be highlighted, the selected alarm and output will be activated, and the event will be recorded in System Log for later retrieval.

Other controls in the Video Object Setup window:

- **Show Reference Image:** Click to view the saved reference image.

- **Never Recycle:** When the item is checked, the events of unattended and missing objects won't be recycled by the system.

- **Embed Alarm Region into Recorded Video:** This option will contain the flashing alert boxes in the recorded files so you can easily find out suspicious events during playback. Note that if you are used to searching suspicious events with Object Search, do not enable this option. These flashing boxes can cause false alarms.

- **Live Disable Alarm Region:** When an unattended or a missing object is detected, this option allows you to close the flashing alert box automatically or manually.

  Click the **[…]** button beside to display Figure 1-58. Select to close the flashing box automatically or manually. Under **Delay Time(s)**, specify the duration of an unattended or a missing object to invoke a warning message, Figure 1-59. The range of delay time is from 1 to 99999 seconds.

  Closing the flashing box will disable object detection and alarm settings no matter automatically or manually. To reactive, please restart monitoring.

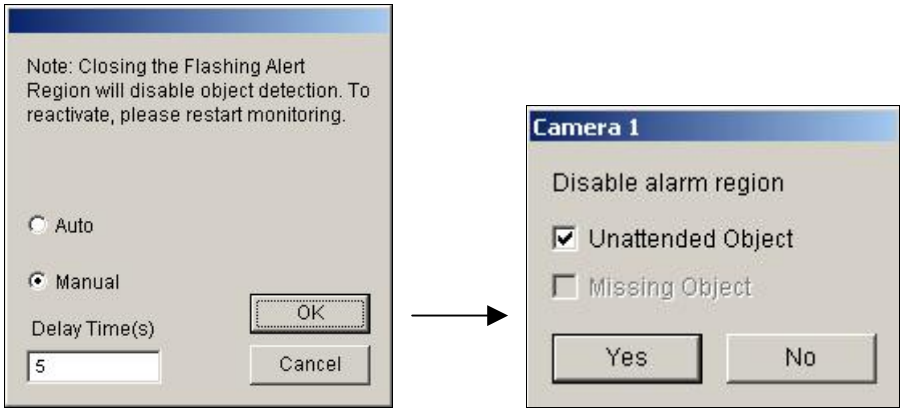


Figure 1-58 ***Figure 1-59***

- **Luminance Change Detection:** This option may suspend object detection when the lighting condition is poor so as to avoid false detection. Use the slide bar to adjust the level of detection from 1 to 5. The higher the level is, the more sensitive the system is to luminance change. When luminance change reaches the level you set, the system will stop object detection.

- **Sensitivity:** Use the slide bar to increase or decrease detection sensitivity if necessary.

- **Delay Time:** This option allows you to specify the duration of an object missing or unattended to invoke the detection.

  Unattended Object: The duration is from 3 to 1800 seconds, with 3 seconds as default. For example, suppose you choose 12 seconds. When an unattended object appears in the camera view for 12 seconds, its location will be highlighted.

  Missing Object: The duration is from 3 to 1800 seconds, with 3 seconds as default. For example, suppose you choose 9 seconds. When a defined object disappears from the camera view for 9 seconds, its location will be highlighted.

- **Invoke Alarm:** Enables the computer alarm when any unattended and/or missing objects are detected. Click the **[…]** button next to the item to assign a .wav sound file.

- **Output Module:** Activates the output device when any unattended and/or missing object is detected. Click the **[…]** button next to the item to assign an installed output module and a pin number.

- **Demo:** Click to see the demonstration from actual DVR applications.

Object Tracking and Zooming

Object Tracking provides you the real-time tracking and automatic magnification of a single moving object by the combination of one PTZ camera and one stationary camera. If only one PTZ camera is available, it can be applied for Object Zooming, letting you configure four critical views for real-time zooming. The Object Tracking and Object Zooming functions can be combined together by completing both settings.

Object Tracking

For the tracking function, you need one PTZ camera applied for tracking and one stationary camera set for a fixed view. Currently, GV- System only supports Sensormatic, PelcoSpetra and Messoa PTZ. Install the PTZ camera and the stationary camera in the best possible closing position, so the focus of both could be similar.

PTZ Setup

Before configuring the Object Tracking function, first configure the PTZ device.

1. Click the **Configure** button, and then select **System Configure** to display the System Configure window.
2. In the PTZ Control section, click **PTZ Device Setup** and select Sensormatic (Ultra IV), **PelcoSpetra 3** or **Messoa (SDS600 series)**. Here we use Sensormatic as example.

Figure 1-60

3. Click to display the Sensormatic Setup window.

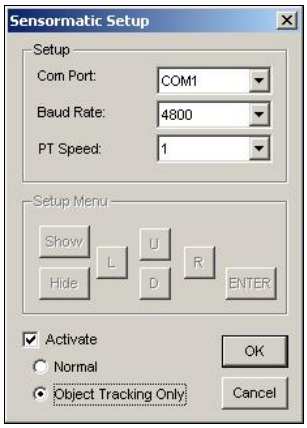


Figure 1-61

4. Enter **Com Port**, **Baud Rate** and **PT Speed** of the PTZ camera.
5. Check the **Activate** item and select **Object Tracking Only**.
6. Click **OK** to apply the settings.

Object Tracking Setup

After the above PTZ setup, go back to the menu bar. Click the **Configure** button, point to **Object Tracking Application**, and click **Object Tracking Setup** to display the following window. The left screen is the PTZ camera view and the right screen is the stationary camera view.

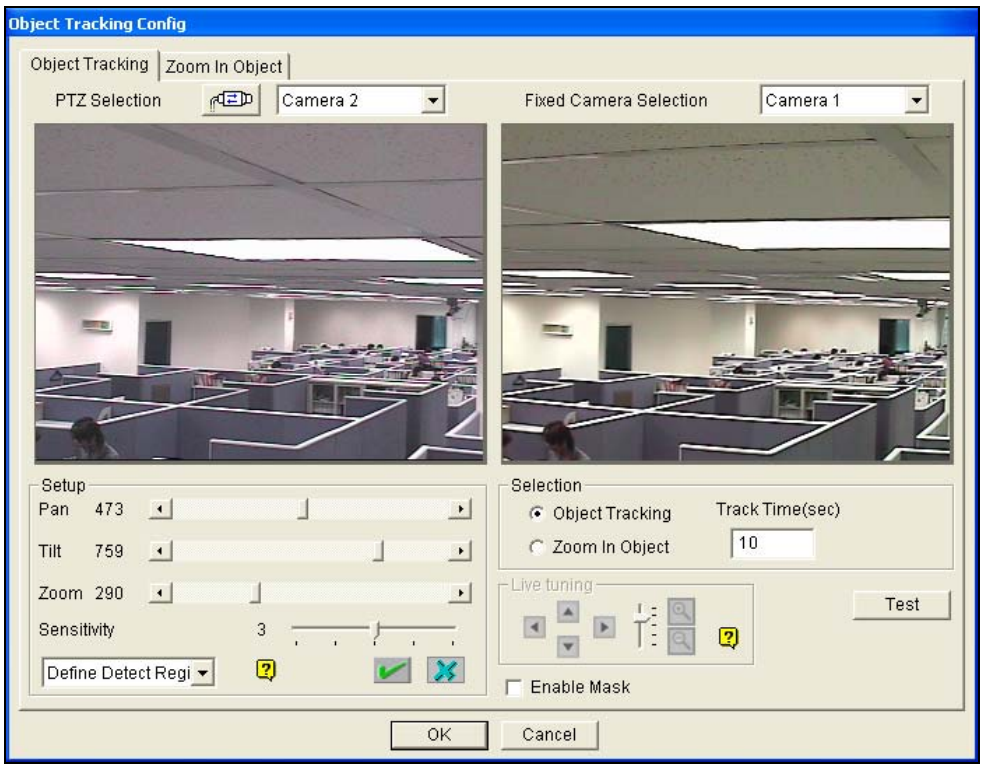


Figure 1-62

[PTZ Selection]

- **:** Click to set up the PTZ.
- **Camera:** Click the drop-down menu to choose the corresponding camera screen of the PTZ.

[Fixed Camera Selection] Click the drop-down menu to choose the corresponding camera screen of the stationary camera.

[Setup]

- **Pan, Tilt and Zoom:** Use the slide bars to adjust the PTZ camera view.
- **Sensitivity:** Use the slide bar to adjust the detection sensitivity.
- **The drop-down menu:** Click the drop-down menu to define detection region and object size.

[Selection]

- **Object Tracking:** Click to specify the tracking time.
- **Zoom in Object:** Click to specify the idle time.

[Live Tuning] Adjust directions and the desired level of zooming.

[Enable Mask] Click to display the mask on the defined detection region.

1. Click to display the following window, select the PTZ brand and the hardware address, and click **OK** to apply the settings.

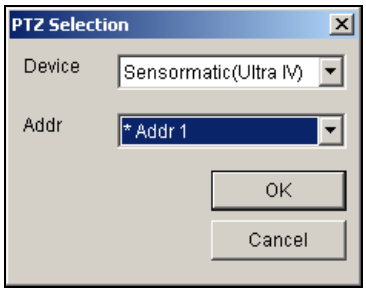


Figure 1-63

2. Choose the corresponding camera screens of the PTZ and stationary camera. For this example, the images of the PTZ camera show in the camera 2 screen while the images of the stationary camera display in the camera 1 screen.
3. Adjust the screen view of the PTZ camera with the slide bars of Pan, Tilt and Zoom. Let the PTZ camera view similar to the stationary camera view.
4. Click the **Save** button to save the both views as image references.
5. Adjust **Sensitivity** or keep it as default.
6. Select **Define Detect Region** from the drop-down menu. Use the mouse to outline a detection region in the right screen; you will be prompted to enter **Detect Region**. See the illustration below.

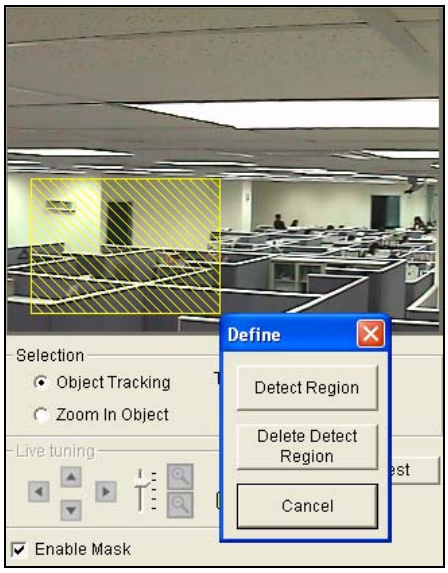


Figure 1-64

7. Select **Define Object Size** from the drop-down menu. Use the mouse to outline the max and min object sizes for tracking separately. Every time when finishing the outlining, you will be prompted to enter **Maximum Object Size** or **Minimum Object Size**. See the illustration below.

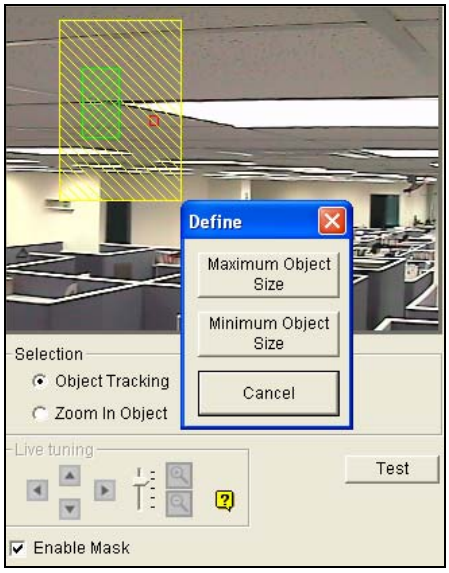


Figure 1-65

8. Click the **Object Tracking** item and specify **Track Time(sec)**. Track Time(sec) indicates the tracking duration in seconds.

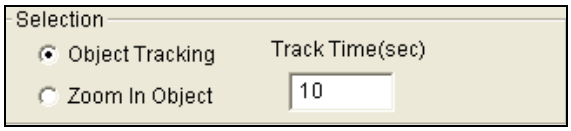


Figure 1-66

9. When the PTZ is tracking, you can still control it to zoom in a desired area. Click the **Zoom in Object** item and specify **Idle Time(sec)**. Idle Time (sec) indicates the zooming duration in

seconds. If a target appears after the specified idle time, the PTZ will start tracking. If not, the PTZ will remain on the zoomed place.

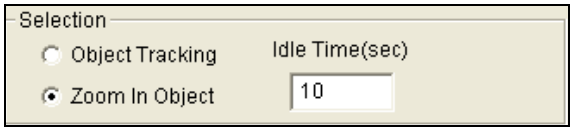


Figure 1-67

10. Click the **Test** button to check your settings. There are two major settings you have to observe in the testing. 1) Tracking: Observe if the target showing in the defined detection region is being tracked with a highlighted mask, and magnified automatically in the left screen. If not, increase the sensitivity degree. 2) Zooming: Use the mouse to outline an object in the right screen, and observe if it is magnified in the left screen clearly. If not, use the **Live Tuning** buttons to adjust directions and the desired level of zooming.
11. Click **OK** in the lower of the window to save your settings of the tracking time, the idle time for zooming in objects and the testing results.

Starting Object Tracking

After the above settings, you can start the object tracking application. Click the **Configure** button, point to **Object Tracking Application**, and then click **Object Tracking Start** to start the function.

Zooming in Objects

While the PTZ is being applied for tracking, you can still control it to zoom in any desired area by launching the Zoom in Dialog window.

1. Click the **Configure** button, point to **Object Tracking Application**, and then click **Object Tracking View** to launch the Zoom in Dialog window, overlapping in the main screen, as shown below.

   Note: The Zoom In Dialog window is for the stationary camera view and the main screen is for the PTZ view.

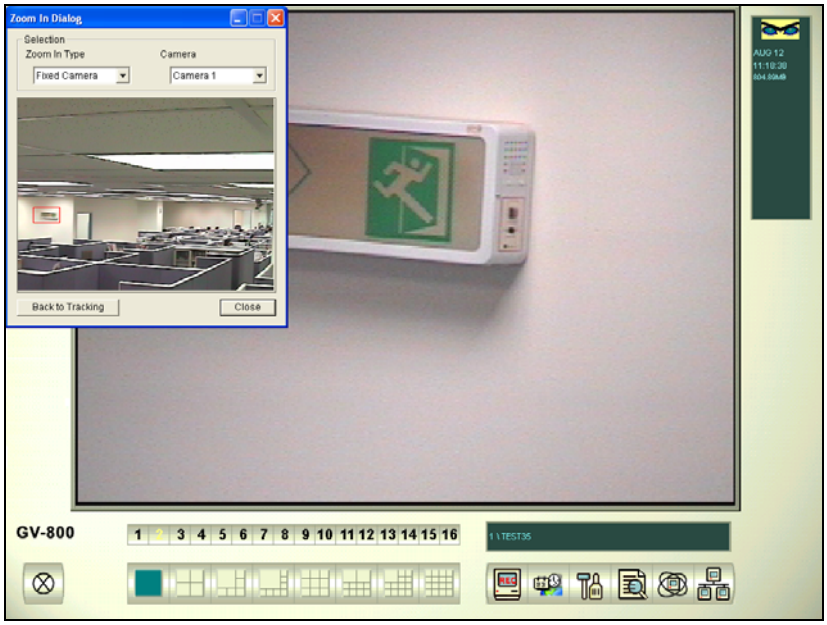


Figure 1-68 *The outlined area in the Dialog window is magnified in the main screen*

2. In the Zoom In Type field, select **Fixed Camera**.
3. In the Camera field, select the assigned camera screen for the stationary camera.
4. Use the mouse to outline a desired area in the Dialog window. It will be magnified in the main screen.

When the specified idle time of zooming is up, PTZ will go back for tracking. If you want to stop the zooming function before the specified idle time, click the **Back to Tracking** button in the lower of the Dialog window. Then PTZ will go back tracking instantly.

Object Zooming

If only one PTZ camera is available, without the stationary camera, you can simply apply it for the object zooming function. The feature allows you to configure up to 4 critical views for instant monitoring and zooming.

PTZ Setup

Before configuring the Object Tracking function, first configure the PTZ device. Refer to the PTZ Setup of Object Tracking.

Object Zooming Setup

After the above PTZ setup, go back to the menu bar.

1. Click the **Configure** button, point to **Object Tracking Application**, and select **Object Tracking Setup** to display the Object Tracking Config window. Then click the **Zoom in Object** tab in the upper part to display the following window.

Note: No images will show in the right screen until you complete the settings below.

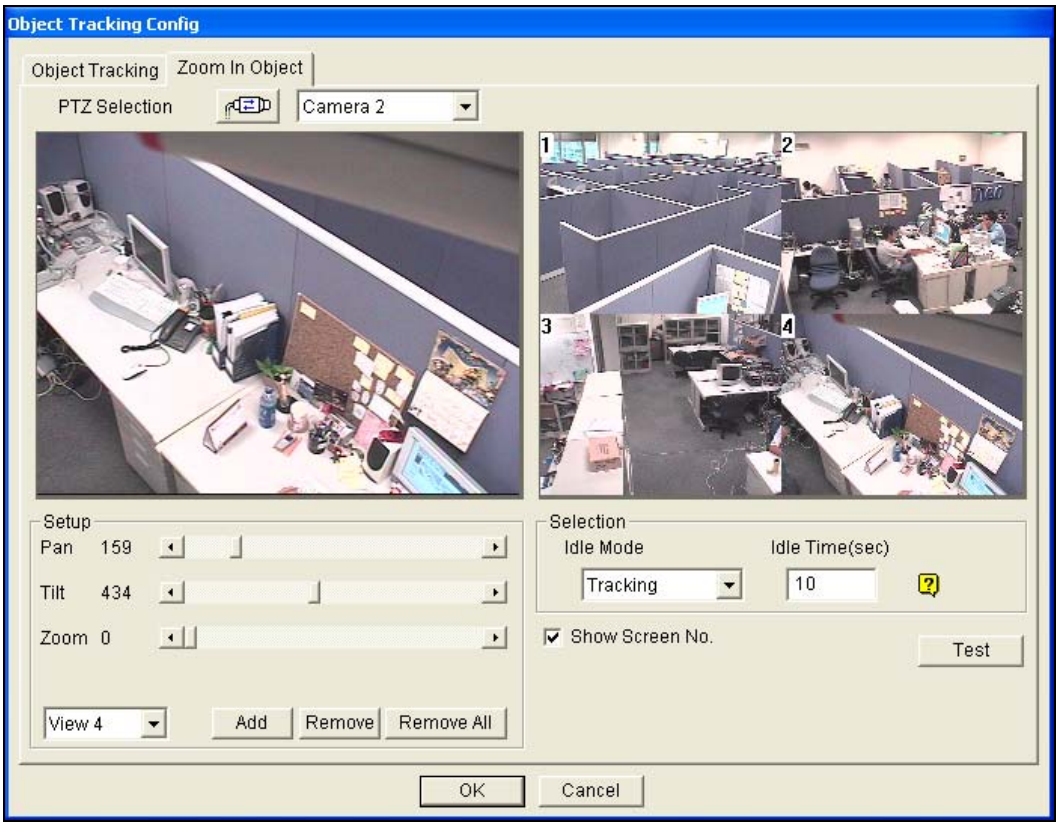


Figure 1-69

2. Click for the PTZ setup. Refer to step 1 in the section of Object Tracking Setup.
3. Choose the camera screen of the PTZ. For this example, the images of the PTZ camera show in the camera 2 screen.
4. Use the slide bars of Pan, Tilt and Zoom to set up the View 1 as shown below. Then click the **Add** button to apply the settings. The View 1 will show in the upper-left corner of the right screen.

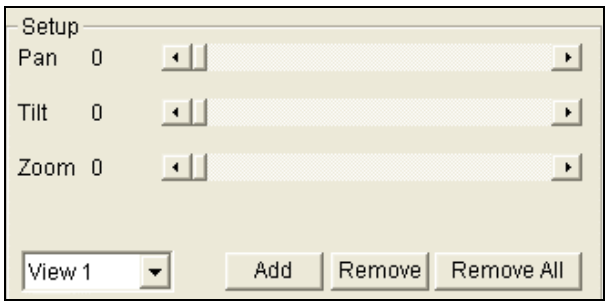


Figure 1-70

5. Click the drop-down menu to set up View 2,3, and 4, one at a time. Refer to step 4 for the View 1.

6. Specify **Idle Time(sec)**, indicating the zooming duration in seconds.

Figure 1-71

7. Click the drop-down menu of the Idle Mode item. The seven options included inside are: **None**, **View 1**, **View 2**, **View 3**, **View 4**, **Tracking** and **Refresh View**.
   - **None:** After zooming, the PTZ camera will remain on the same view until the next zooming command.
   - **Tracking:** After the idle time, the PTZ camera will start tracking if it is also being applied for the tracking function.
   - **View 1,2,3,4:** After the idle time, the PTZ camera will go back to the preset View 1,2,3, or 4.
   - **Refresh View:** After the idle time, the 4 views will be refreshed.

8. Click **Test** to check your settings. Use the mouse to outline a desired area in one of the four views. The area will be magnified in the left screen.
9. Click **OK** to apply the displayed selections and close the window.

Starting Object Zooming

After the above settings, you can start the object zooming application.

1. Click the **Configure** button, point to **Object Tracking Application**, and click **Object Tracking View** to open the Zoom in Dialog window, overlapping in the main screen (see Figure 1-68).
2. In the Zoom In Type field, select **Quad View**.
3. In the Camera field, select the assigned PTZ camera screen. Then the four views you set up before will show in the Dialog window as illustrated below.

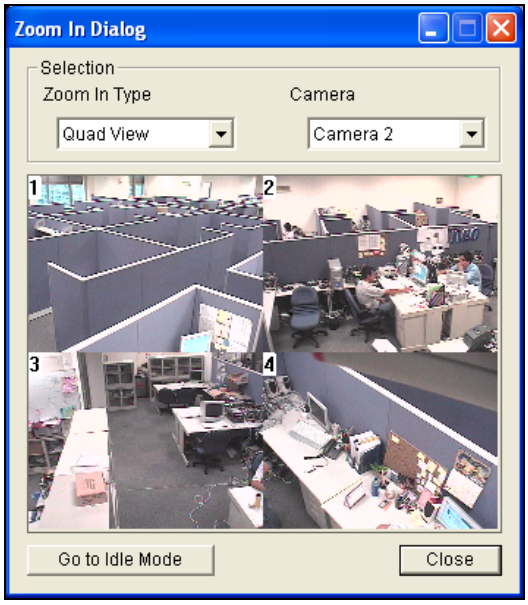


Figure 1-72

4. Use the mouse to outline a desired area in one of the four views. The area will be magnified in the main screen.
5. When you click the **Go to Idle Mode** button in the lower part, your setting in step 7 of Object Zooming Setup will be applied. For example, suppose you choose View 3. When you click the button, the PTZ camera will go to the preset View 3.

Configuring Hybrid Cameras

If your system is installed with the Hybrid DVR card, follow these steps to configure your cameras. One Hybrid DVR card supports 4 camera channels and you may install up to 4 Hybrid DVR cards to one GV-System, so that you may configure 16 cameras at most.

For details on the Hybrid DVR card, see *Installation Guide*.

1. Click the **Configure** button, point to **Camera/Audio Install**, and then select **Hybrid Camera Install**. The Hybrid Video Source dialog box appears.
2. Select the Hybrid DVR channels for setup.
3. Click **Configure**. The Hybrid Camera Configure dialog box appears.

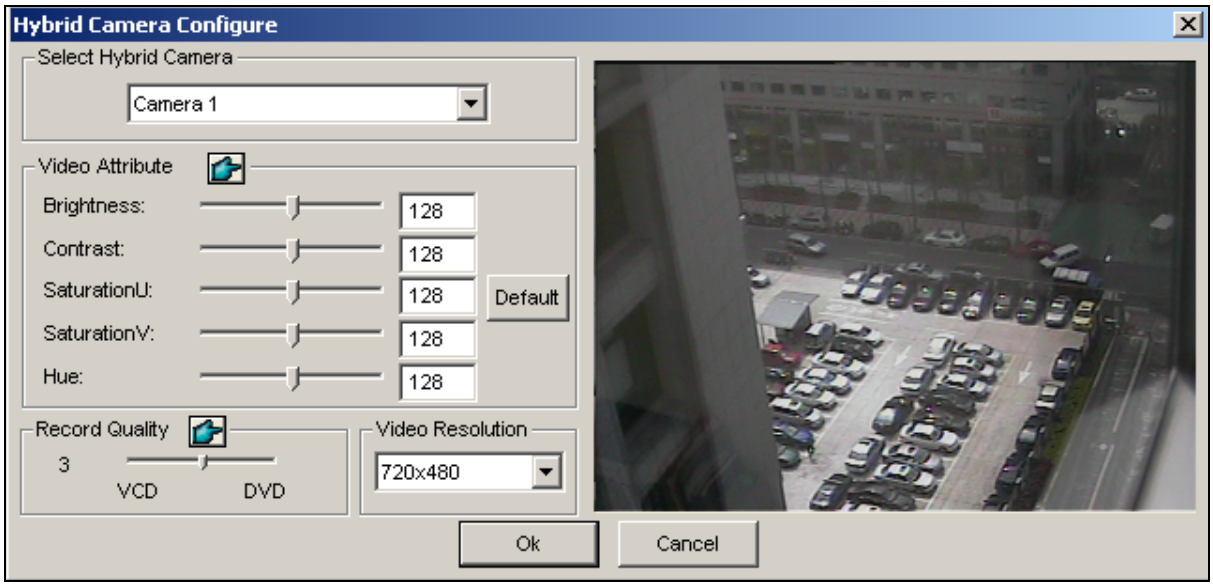


Figure 1-73

[Select Hybrid Camera] Select a camera for setup. You can see the Hybrid DVR card image of the selected camera in the right window.

[Video Attribute] Modify video attributes if necessary. To apply the changes to all cameras, click the **Finger** button.

[Record Quality] Select recording quality up to five levels. The recording quality is directly proportional to file size. To apply the change to all cameras, click the **Finger** button.

[Video Resolution] Displays the NTSC or PAL resolution for the Hybrid DVR card images.

6. Click **OK** for above settings.

Note: The Hybrid DVR card only affects recording quality; all live views are still provided by your capture card.

Privacy Mask Protection

The Privacy Mask can block out sensitive areas from view, covering the areas with black boxes in both live view and recorded clips. This feature is ideal for locations with displays, keyboard sequences (e.g. passwords), and for anywhere else you don't want sensitive information visible.

You can also choose to retrieve the block-out areas during playback. The retrievable areas will be protected by password.

Setting Up a Privacy Mask

1. Click the **Configure** button, and then select **Privacy Mask Setup**. The Privacy Mask Setup dialog box appears.
2. Select the desired cameras for setup, and then click the **Configure** tab. This dialog box appears.

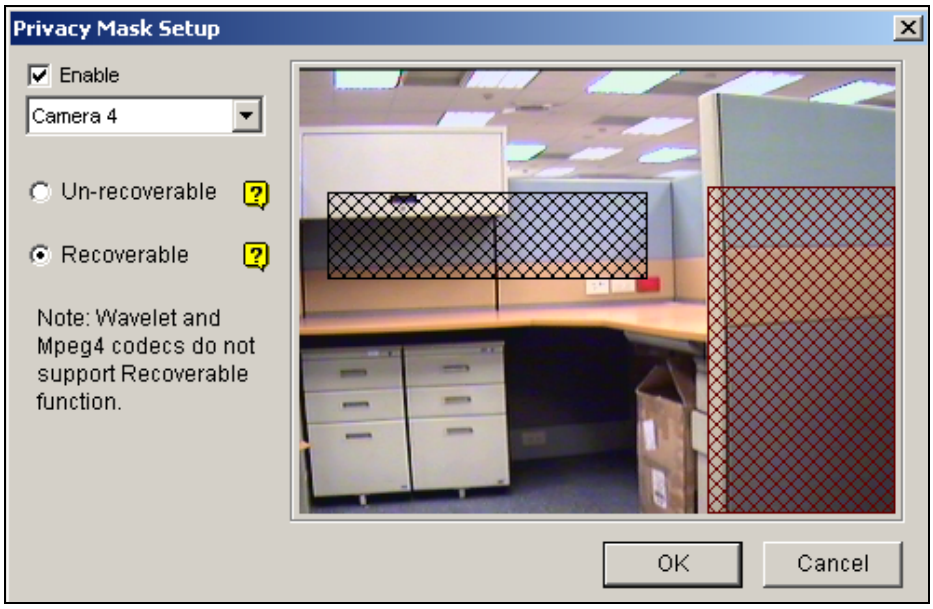


Figure 1-74 *Privacy Mask Setup*

3. Select a camera from the drop-down list, and then check **Enable**.
4. Select Un-recoverable and/or Recoverable.
   - **Un-recoverable:** You cannot retrieve the block-out area(s) in the recorded clips.
   - **Recoverable:** The block-out area(s) is retrievable with password protection.
5. Drag the area(s) where you want to block out on the image. You will be prompted to click **Add** to save the setting. The Un-recoverable region is marked in red, while the recoverable region is shown in green.
6. Click **OK** on the right bottom to save the settings.

Granting Access Privileges to Recoverable Areas

The user must be granted access privileges to see the block-out areas when launching ViewLog for playback.

1. Click the **Configure** button, point to **Password Setup**, and select **Local Account Edit**. The Password Setup dialog box appears.
2. Select one account, click the **Privacy Mask** tab, and check **Restore Recoverable Video** to grant the privilege.

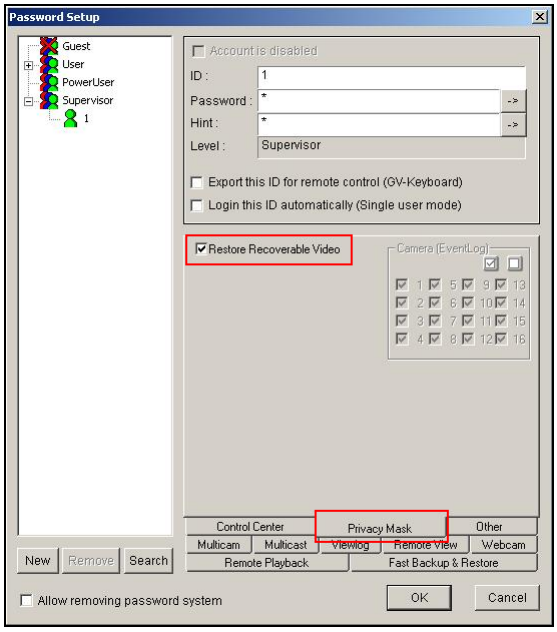


Figure 1-75

Note: If you open the event files (*.avi) directly from local disks, the valid ID and password are also required to access the block-out areas. For more information on retrieving the block-out areas in the exported files, see *Exporting Privacy Mask* in Chapter 4.

Scene Change Detection

The Scene Change Detection can detect when a camera has been tampered physically. This feature can generate an alert whenever someone or something has covered the lens of the camera, or when the camera has been moved, or when it is out of focus.

1. Click the **Configure** button, and then select **Scene Change Detection Setup**. The Scene Change Detection Setup dialog box appears.
2. Select the desired cameras for setup, and then click the **Configure** tab. This dialog box appears.

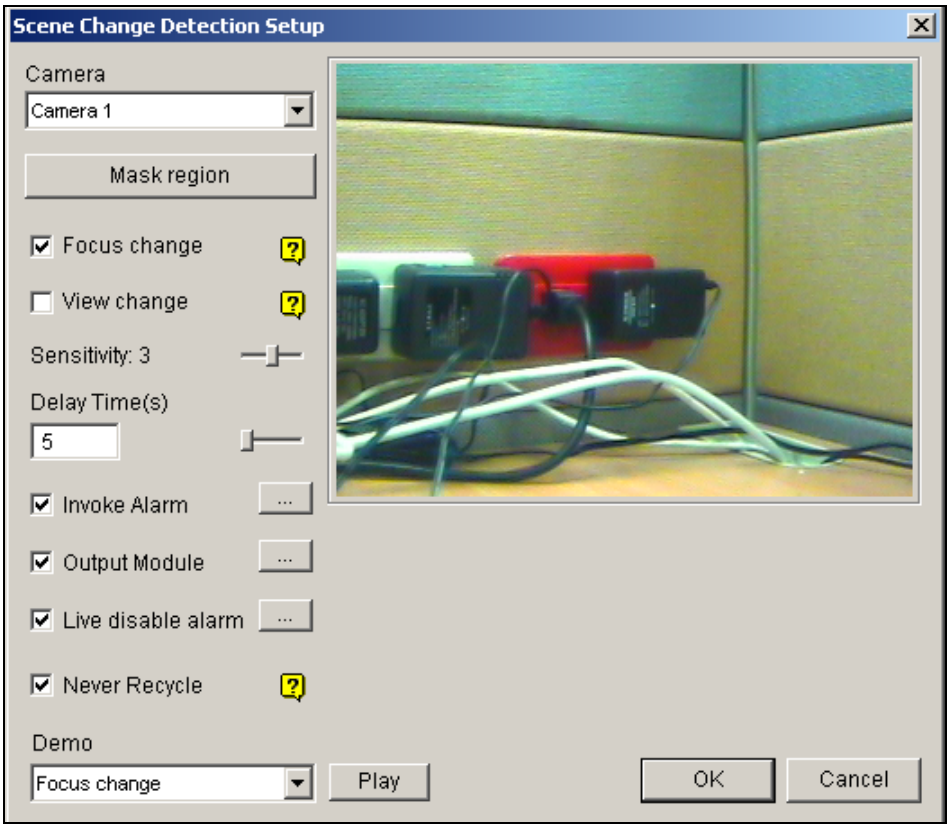
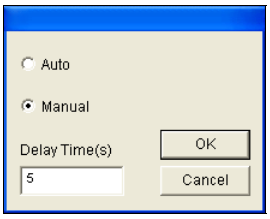


Figure 1-76 *Scene Change Detection Setup*

- **Camera:** Select the camera for setup.
- **Mask region:** Masks off the areas where motion will be ignored.
- **Focus change:** Sends an alert when the camera is out of focus.
- **View change:** Sends an alert when the camera has been moved, or the lens of the camera has been covered.
- **Sensitivity:** Adjusts detection sensitivity. The default value is 3.
- **Delay Time(s):** Sets the duration of Scene Change to record to System Log.
- **Invoke Alarm:** Activates the computer alarm when Scene Change is detected. Click the **[…]** button beside to assign a .wav sound file.
- **Output Module:** Activates the output device when Scene Change is detected. Click the **[…]** button beside to assign the output module and pin number.

- **Live disable alarm:** Choose whether to invoke the warning message when Scene Change is detected. Click the **[…]** button beside to display Figure 1-77.



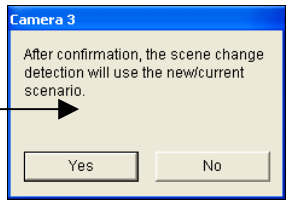


Figure 1-77 ***Figure 1-78***

If you select **Auto**, there is no warning message; if you select **Manual**, the warning message, Figure 1-78, will appear when Scene Change is detected. Under **Delay Time(s)**, you can define the duration of Scene Change to invoke the message. The range of delay time is from 1 to 99999 seconds.

- **Never Recycle:** When the item is checked, the Scene Change events will not be recycled by the system.
- **Demo:** See three examples of Focus Change and View Change. Click the **Play** button to see the demonstration.

Note: When the event of Focus Change or View Change has been detected, it will be recorded as **Scene Change** in System Log for later retrieval.

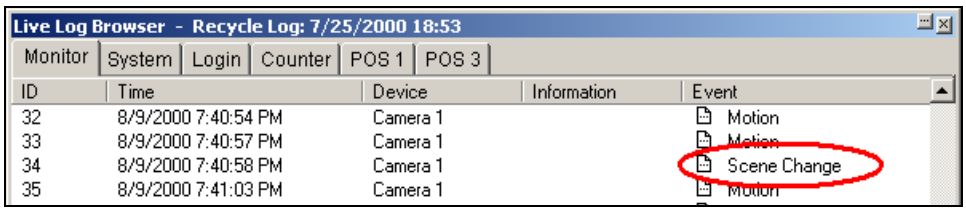


Figure 1-79 *System Log*

Advanced Motion Detection

To avoid false motion detection, the Advanced Motion Detection feature provides three solutions:

- Create up to 5 levels of motion detection sensitivity in one region
- Mask off unwanted areas for monitoring, such as cloud and tree movement
- Ignore motion when the lighting condition is poor

1. Click the **Configure** button, and then select **Advanced Motion Detection Setup**.
   The Advanced Motion Detection Setup dialog box appears.
2. Select the desired cameras for setup, and then click the **Configure** tab. This dialog box appears.

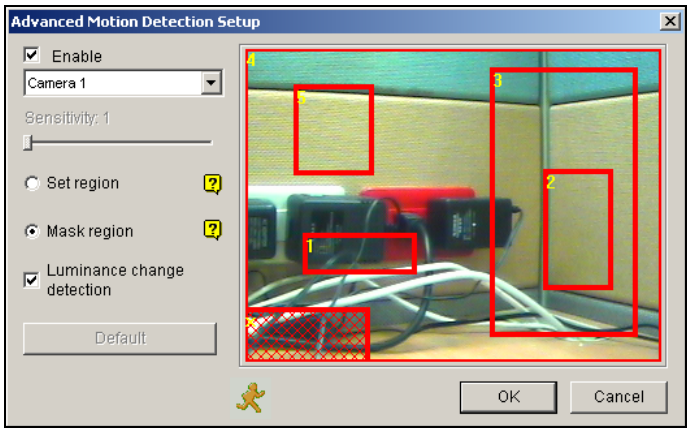


Figure 1-80 *Advanced Motion Detection Setup*

3. Select the desired camera from the drop-down list, and then check **Enable**.
4. To set detection sensitivity in a specific area, select a sensitivity level by moving the slide bar, and then drag an area on the image. You will be prompted to click **Add** to save the setting.
   This setup has sensitivity levels from 1 to 5, with 4 as default.
5. To create several areas with different sensitivity levels, repeat Step 4.
6. If you want to ignore motion in a certain area, click **Mask Region**, and then drag an area on the image.
7. If you want to ignore motion when the lighting condition is poor, check **Luminance Change Detection**.
8. Click **OK** to save your settings.

Note:

1. This feature must work with the recording mode of Motion Detection: click the **Configure** button, point to **System Configure**, click the **Camera** tab, check **Rec Video**, and then select **Motion Detect** (see *Figure 1-8*).
2. If you have set up **Motion Sensitivity** and **Mask Filter** in the System Configure settings (Figure 1-8), note that the configurations of Advanced Motion Detection have priority over these settings.

Hard Disk Calculator

Before actual recording, the Hard Disk Calculator allows you to know the required hard disk space and frame size for different types of codecs and quality.

1. Click the **Configure** button, point to **Video Attributes**, and then click **Advanced**. The Advanced Video Attributes dialog box appears.
2. Click the **HDD Calculator** tab at the right bottom. The HDD Calculator dialog box appears.

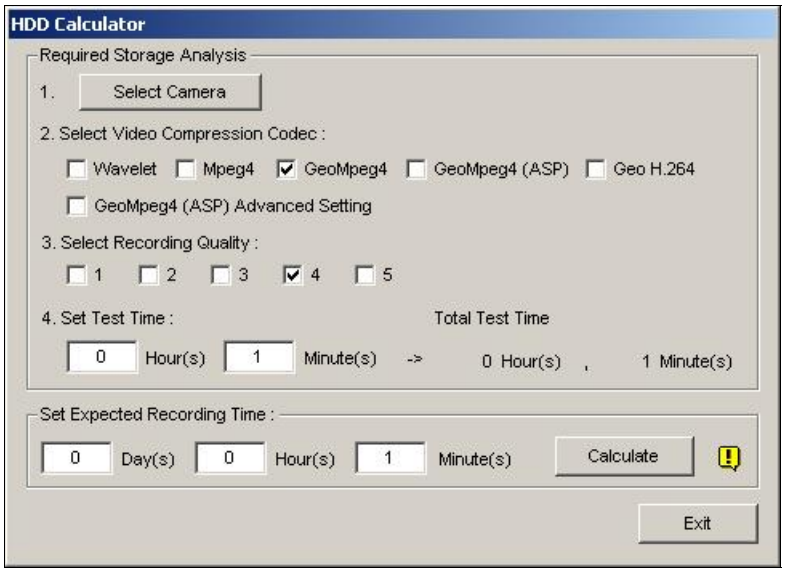


Figure 1-81

- **Select Camera:** Select cameras to be used for recording.
- **Select Video Compression Codec:** Check the desired codec(s) to be used for recording. You can choose more than one codec to compare their performance.
- **Select Recording Quality:** Check the desired quality value(s) for recording. You can choose more than one quality value for comparison.
- **Set Test Time:** The system will process a real-time test recording based on the time you set. For example, if you enter 24 hours here, it will take more than one day to do the test recording. So avoid entering the longer test time to save you time.
- **Set Expected Recording Time:** Enter the time you wish for recording.

3. Click the **Calculate** tab to see the result.

Note: A calculation difference by ± 5 % from actual disk usage is expected.

DSP Spot Monitor Controller

The Controller integrates the GV-DSP Card with spot monitor (TV monitor) applications. It allows screen divisions on the spot monitor differently from the main screen.

With the Controller, you can also define the channel sequence of the display screen and adjust video images on the spot monitor.

Note: The GV-DSP-100 Card doesn't support this feature.

Spot Monitor Controller

To open the Spot Monitor Controller, follow these steps:

1. Click the **Configure** button, point to **DSP Spot Monitor**, and then select **Spot Monitor Setup**. This dialog box appears.

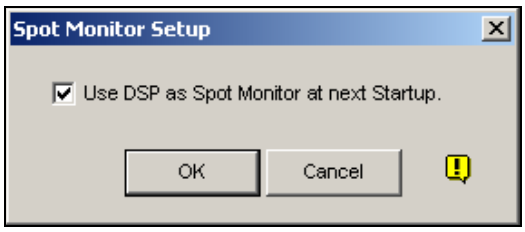


Figure 1-82

2. Check **Use DSP as Spot Monitor at next Startup**, and click **OK**.
3. Restart the GV-System.
4. Click the **Configure** button, point to **DSP Spot Monitor**, and then select **Spot Monitor Controller**. The Spot Monitor Control window appears.

Note: When the DSP Spot Monitor Control feature is enabled, DSP Overlay will be disabled in the Main System.

[Advanced Layout]

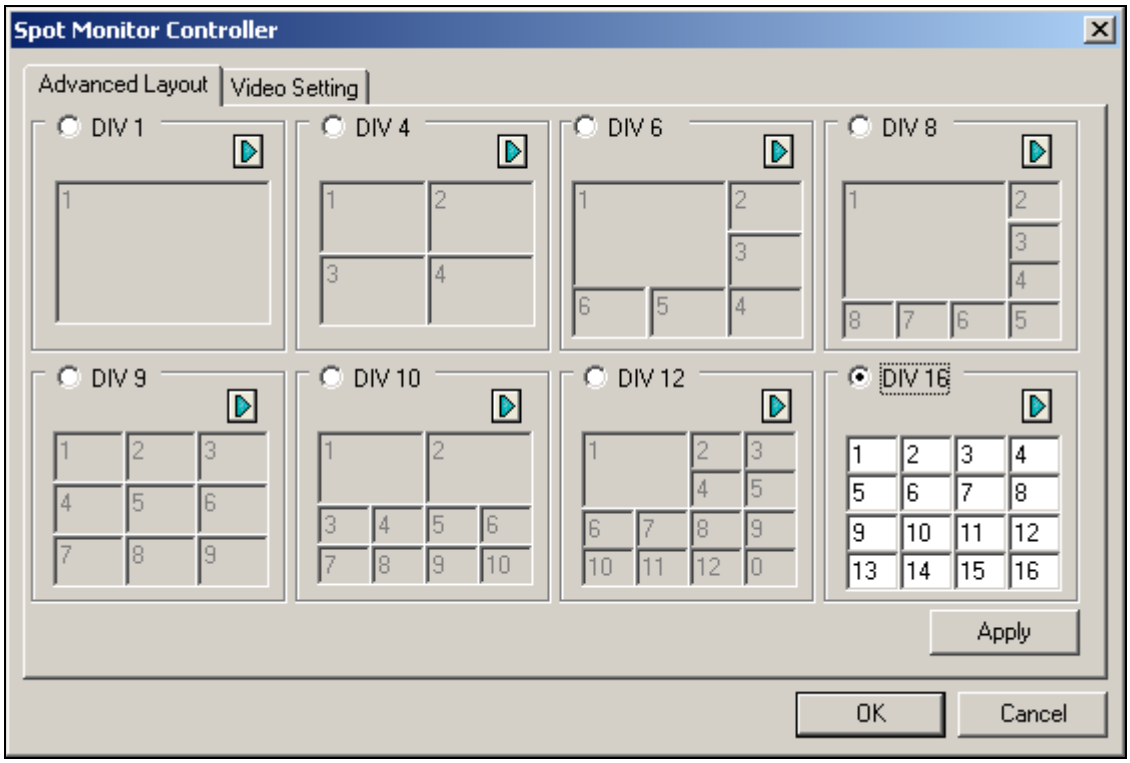


Figure 1-83 *Spot Monitor Controller*

- **DIV 1-16:** Screen division option. You can modify the channel sequence by typing the number directly on each division. Click **Apply** or **OK** to apply your settings.
- **Right Arrow button:** Sets the channel sequence of each scanned page (see *Scan Setting* on Figure 1-85). Click the button to display this dialog box.

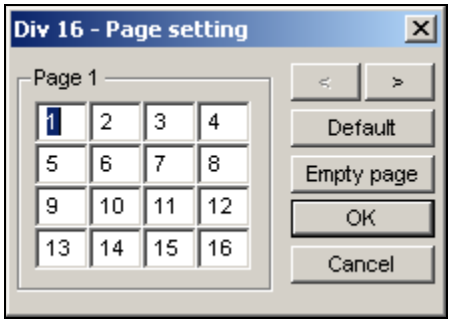


Figure 1-84 *Page Setting*

- **Screen Division:** Displays the channel sequence. You can modify the sequence by typing the number directly on each division.
- **< > buttons:** Navigate pages.
- **Empty page:** Clears up the channel sequence of the open page.

[Video Setting]

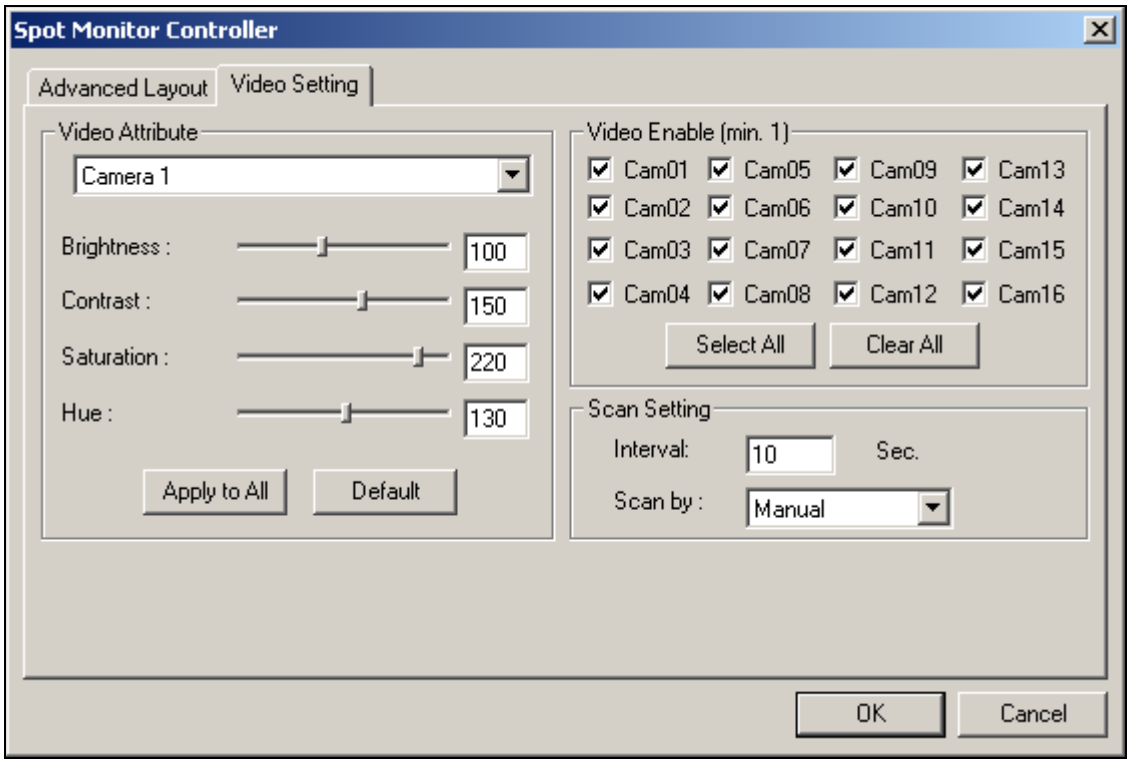


Figure 1-85

[Video Attribute] Select a desired camera from the drop-down list to adjust image attributes, such as Brightness, Contrast, Hue and Saturation.

[Video Enable] Check the desired cameras for display on the spot monitor.

[Scan Setting] Enter the interval between the scanned pages. Select **Auto** if you want to automatically scan the cameras or **Manual** to scan at your own speed.

Spot Monitor Panel

Click the **Configure** button, point to **DSP Spot Monitor**, and then select **Spot Monitor Panel**.

This panel appears.

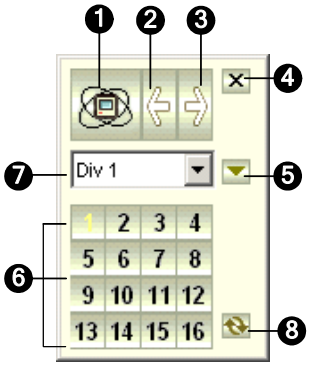


Figure 1-86

The controls on the DSP Spot Monitor Panel:

No.	Name	Description
1	Scan	Automatically or manually rotates channels and stops rotation.
2	Previous Page	Goes to the pervious page of the scanned pages.
3	Next Page	Goes to the next page of the scanned pages.
4	Exit	Closes the DSP Spot Monitor Panel.
5	Switch	Opens or closes the channel menu.
6	Channel Menu	Displays the desired channel for single view.
7	Screen Division	Sets screen divisions to 1, 4, 6, 8, 9, 10, 12 and 16.
8	Zoom Esc	After single view, click this button to restore the first scanned page, but to the last channel when the screen division is set to 1.

System Idle Protection

The System Idle Protection allows the administrator to work on the system without the worry of logout or leaving the system not recording anymore.

This feature can automatically logout the administrator, login a user with no access rights and/or start recording.

Auto Logout Administrator

If the administrator does not press the mouse or press a key within a set period of time, the system will automatically log him/her out.

1. Click the **Configure** button, and then select **System Idle Protection Setting**. This dialog box appears.

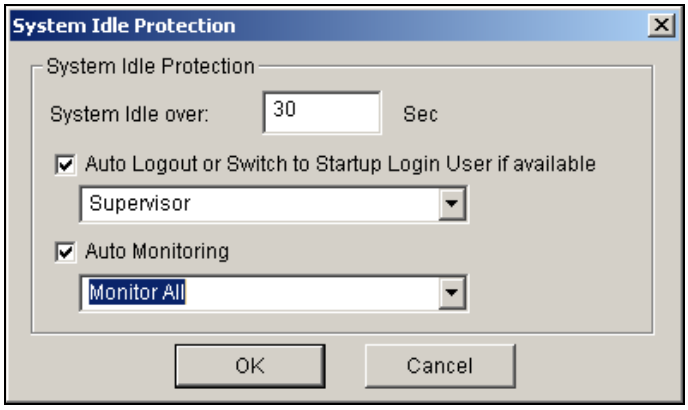


Figure 1-87

2. Enable the **Auto Logout or Switch to Startup Login User if available** option, and then select **Supervisor** or **Supervisor, Poweruser** from the drop-down list.
3. In the System Idle Over field, type the idle time from 10 to 300 seconds, after which Supervisor or Poweruser will be logged out.

Auto Login User without Access Rights

When the system is started up after an idle time, a specified user with no access right will login. This allows the user to see the system is on and working, but at the same time does nothing with the system. The feature must work with the **Startup Auto Login** function.

1. Click the **Configure** button, and select **System Configure**.
2. In the Startup section, enable **Startup Auto Login**, and click the **Arrow** button beside (see *Figure 1-3*). The Startup Auto Login Setup dialog box appears.
3. Type **ID** and **Password** to set up a user for auto login, and click **OK**.

Figure 1-88

4. In the System Idle Protection dialog box (see *Figure 1-87*), enable the **Auto Logout or Switch to Startup Login User if available** option, and then select **Surpervisor** or **Supervisor, Poweruser** from the drop-down list.
5. In the System Idle Over field, type the idle time from 10 to 300 seconds, after which the specified user will be logged in.

Auto Start Recording

If the administrator does not press the mouse or press a key within a set period of time, the system will automatically start recording.

1. In the System Idle Protection dialog box (see *Figure 1-87*), enable the **Auto Monitoring** option, and select **Monitoring All**, **Schedule Monitoring** or **I/O Monitoring** from the drop-down list.
2. In the System Idle Over field, enter the idle time from 10 to 300 seconds, after which the system will start recording.

Note: The feature can monitor keystrokes or mouse clicks, even from IR Remote Control and GV-Keyboard.

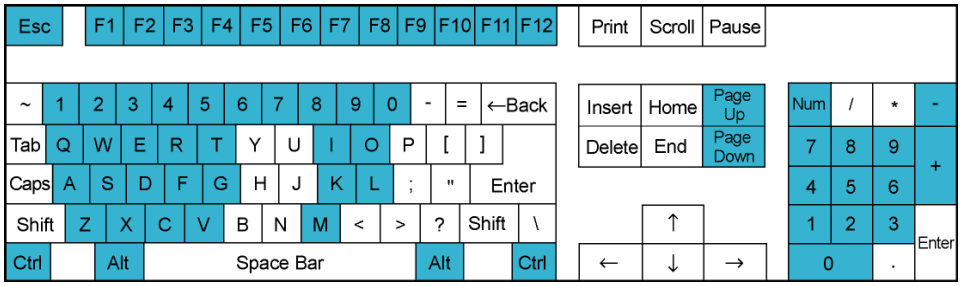
Version Information

To know which version of GV-System you have, click the **Configure** button, and then select V**ersion Information**.

Fast Key Reference

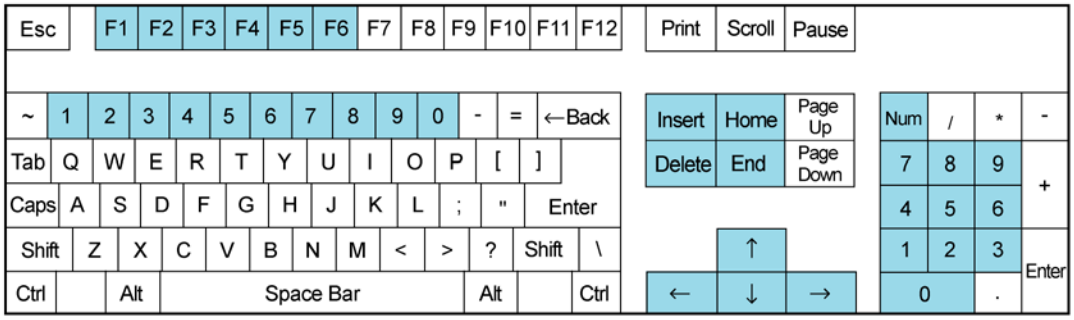
This option lets you view the fast key windows of Main System and PTZ Control, giving you an instant reference. Click the **Configure** button, point to **Tool Kit**, and then select **Fast Key List** to display the fast key table of Main System. Click **Close** to display the table of PTZ Control.

Main System


Esc
F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12
Print Scroll Pause
~ 1 2 3 4 5 6 7 8 9 0 - = ←Back
Tab Q W E R T Y U I O P [ ]
Caps A S D F G H J K L ; " Enter
Shift Z X C V B N M < > ? Shift \
Ctrl Alt Space Bar Alt Ctrl
Insert Home Page Up
Delete End Page Down
↑
← ↓ →
Num / * -
7 8 9 +
4 5 6
1 2 3 Enter
0 .

Key	Function
Esc	Return to the default screen
Num 1-9, 0 and F1-F6 or Alt+”01”~Alt+”16”	Switch the camera channel
F7	Start/Stop monitoring
F8	Start/Stop monitoring schedules
F9	Open the System Configure Setup dialog box
F10	Open ViewLog
F11	Start/Stop the camera scan function
F12	Enable/Disable all network connections
A, a	Display the version information
R, r	Restart by Last Settings
Ctrl+R	Restart by Startup Settings
M, m	Start/Stop modem connection
T, t	Start/Stop TCP/IP connection
W, w	Start/Stop WebCam connection
I, i	Start/Stop IP Multicast connection
V, v	Start/Stop connection to Center V2
S, s	Start/Stop TwinServer
G, g	Start/Stop connection to VSM
C, c	Start/Stop CMS Server
F, f	Start/Stop full screen view
L, l	Login/Change the user
O, o	Logout from the current user
Q, q	Switch the screen division
Ctrl+Q,W,E,A,S,D,Z,X	Switch to a specific screen division
Z, z	Minimize the Main System window
X, x	Exit the Main System
K, k	Display the Fast Key Reference table
Page Up	Switch to the previous screen
Page Down	Switch to the next screen
Ctrl+Num 1-9, 0 and F1~F6	Take a snapshot
+, -	Zoom in/out the single camera view

PTZ Control


Esc
F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12
Print Scroll Pause
~ 1 2 3 4 5 6 7 8 9 0 - = ←Back
Tab Q W E R T Y U I O P [ ]
Caps A S D F G H J K L ; " Enter
Shift Z X C V B N M < > ? Shift \
Ctrl Alt Space Bar Alt Ctrl
Insert Home Page Up
Delete End Page Down
↑
← ↓ →
Num / * -
7 8 9 +
4 5 6
1 2 3 Enter
0 .

Key	Function
←	Pan left
→	Pan right
↑	Tilt up
↓	Tilt down
Insert	Focus in
Delete	Focus out
Home	Zoom in
End	Zoom out
Num 1~9, 0 and F1~F6	Switch the camera channel

Fast Key Lockup

If you wish not to use certain fast keys and do not want them to interfere with the keyboard use, you can disable the fast key functions.

1. On the main screen, click the **Configure** button, point to **Tool Kit**, and then select **Fast Key Lock Setup**. This dialog box appears.

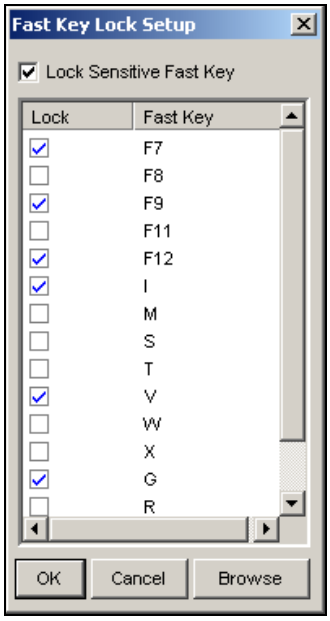


Figure 1-88

2. Check **Lock Sensitive Fast Key**, and check the fast keys you want to disable. To restore the fast keys, uncheck them again.
3. Click **OK** to apply your settings.

PTZ Protocol and Model Support

This list is for you to view the PTZ protocols and models that GV-System supports. When you set up PTZ control in the System Configure window, click the drop-down list to select the PTZ device.

PTZ Protocol and Model Support	
Ademco (Jupiter)	Lilin PIH (PIH-7000 / 7600 / 7600PL / 7625)
BOSCH (TC 700 / 8560)	MESSOA (SDS600 Series)
Canon (VC-C3 / VC-C4)	Mintron (54G2AHN/P)
CBC GANZ (ZC-S120 Series)	Minking Dome
Chiper (V9KRP)	Panasonic (WV-CS850 / 854)
Direct Perception (PTU Series)	Pelco Dome
D-Max Dome	Pelco (Spectra 3)
DongYang (DOH-240)	PTZ in I/O
DynaColor (D-7720 / 7722)	SAE (DR-E 588)
Dynacolor Dome	Samsung (SCC-641 / 643)
Elbex (Matrix / 1000)	Samsung (SPD-1600)
GKB (SPD-221)	Sensormatic (Ultra IV)
JEC Dome	Sony (EVI-D100 / D100T)
JVC (TK-S576B / TK-S655)	TOA (CC551)
Kalatel Cyber Dome (with KTD-312)	VIDO Dome
Kampro Technology (K-ZC23)	YAAN Dome
Kenko (DMP23-H1)	

Note: GV-System only supports original factory models. Other brands of cameras claiming of the same protocol compatibility may not work properly with GV-System. GeoVision takes no responsibility of such incompatibility.

CHAPTER

2

I/O Applications

This chapter discusses how you can set up and control the I/O devices connected to GV-System. I/O applications include these features:

- Configure I/O devices
- Move PTZ to a preset location on input trigger
- Support access control systems of Momentary and Maintained modes
- Arm and disarm I/O devices without interfering the monitoring
- Centrally manage I/O devices across the wide area by the Advanced I/O Panel

Setting Up I/O Devices

Devices necessary for I/O applications are: GV-Net, GV-Net card, GV-NET/IO card, GV-IO and GV-Relay. For details, see Chapter 2 in the *Installation Guide.*

To connect an I/O device to GV-System, you need to configure the settings. On the main screen, click the **Configure** button, point to **System Configure**, and then click the **I/O Device** tab. This window appears.

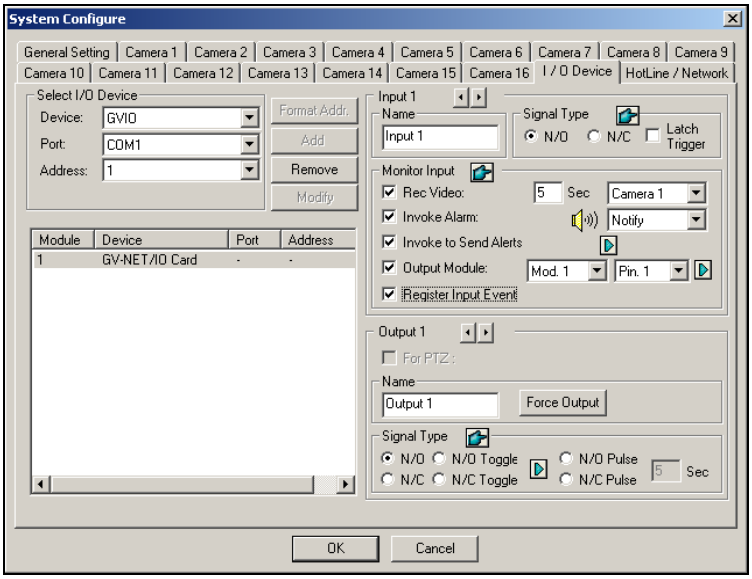


Figure 2-1 *I/O Settings*

[Select I/O Device] Adds an I/O device to the system:

1. Select the device from the **Device** drop-down list, for example, GV-IO Card.
2. Click the **Format Addr.** button to assign an address to the device. The Format Address dialog box appears.
3. Start your first device with **New Address** set to 1. Click the **Write** button to write the address to the device. Click **OK** to apply the setting.
4. Click the **Add** button. You should see the device listed in the display window.

Note: Repeat above steps to add more devices once at a time. Each device should have its own address; therefore, in step 3 you should assign a different address for the new device.

[Input X] Click the **Arrow** buttons to select an Input to set up. One GV-IO module provides up to 8 inputs.

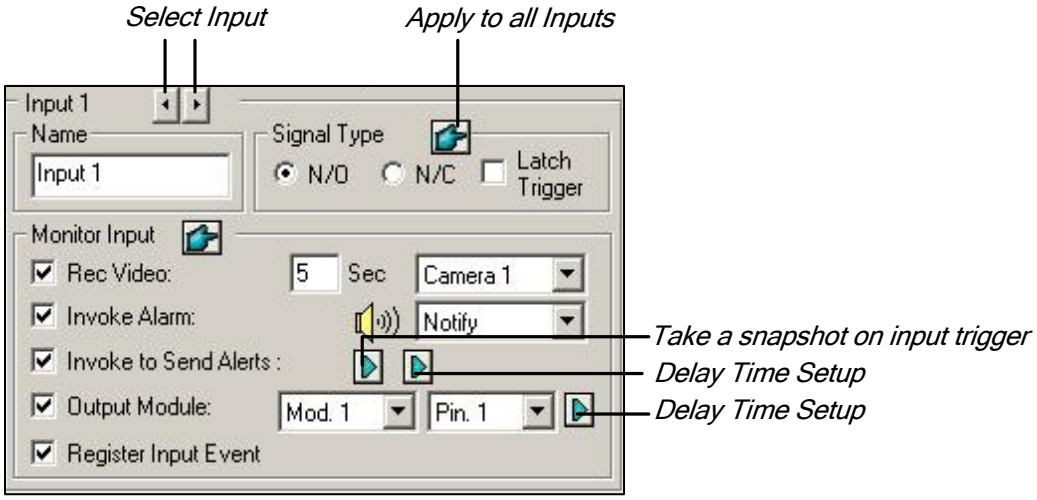


Figure 2-2

- **Name:** Specifies a name for each input device in the Name field. (Click the **Arrow** button to set up next input).
- **Signal Type:** Select signal type for your input device. You may use the **Finger** button to apply your selection to all input devices.
  For details on Latch Trigger, see *Latch Trigger* later in this chapter.

[Monitor Input]

- **Rec Video:** Check this option to use the input (sensors or detectors) to trigger recording. You may select which camera to record in the Camera Select drop-down list and specify the recording duration.
- **Invoke Alarm:** Check this option to activate computer alarm when the input is triggered. You may select the alarm type in the drop-down menu.

- **Invoke to Send Alerts:** Check this option to send out an assigned alert (E-Mail/Hotline/SMS) when the input is triggered.

  1st Right Arrow button: Appears when E-Mail is the assigned alert. Click to select the camera(s) to take a snapshot on input trigger. The snapshot will be sent out by E-Mail.

  2nd Right Arrow button: Click to set the delay time to activate assigned alerts (E-Mail/Hotline/SMS).

- **Output Module:** If the input is invoked, the system will automatically send a signal to an output pin.

  Right Arrow button: Click to set the delay time to activate the assigned output module.

  Note: The delay functions in **Invoke to Send Alerts** and **Output Module** allow you time to deactivate prior alert and output settings. To deactivate these settings, you may stop monitoring or enable the assigned input module set at "**Deactivate notification when selected pin ON**" in I/O Application window (see Figure 2-8).

- **Register Input Event:** This option logs the alarm events into System Log. Each event is labeled with ID, time, device name (camera or I/O input), corresponding module of the device, and event for later retrieval. For details on *System Log,* see Chapter 1.

[Output X] Click the **Arrow** buttons to select an output. One GV-IO module provides up to 16 outputs.

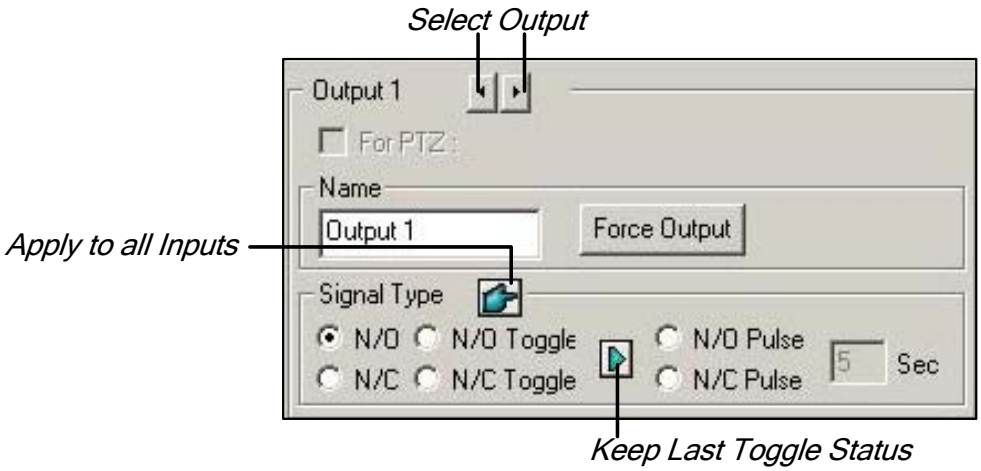


Figure 2-3

- **For PTZ:** This option opens the PTZ Control Panel, where to control movements of your PTZ camera.
- **Name:** Specifies a name for each output device in the Name field.
- **Force Output:** Click to test signal to the selected device.

- **Signal Type:** There are six signal types available: N/O (Normal Open), N/O Toggle, N/O Pulse, N/C (Normal Closed), N/C Toggle, and N/C Pulse. Choose the one that mostly suits the device you're using. The N/O Toggle or N/C Toggle signal type is the output high mode that turns to output low until the monitoring is stopped. You can also specify the pulse duration for pulse type signals.
- **Keep Last Toggle Status:** See *Keeping Last Toggle Status* later in this chapter.

Note: PTZ camera and I/O devices cannot be assigned to the same port at the same time.

Latch Trigger

Instead of constant output alarm in N/O and N/C, the Latch Trigger option provides a momentary alarm, and allows you to set the alarm duration.

Setting up Latch Trigger:

On the main screen, click the **Configure** button, point to **System Configure**, click the **I/O Device** tab, and then check **Latch Trigger**. See the red square in this dialog box.

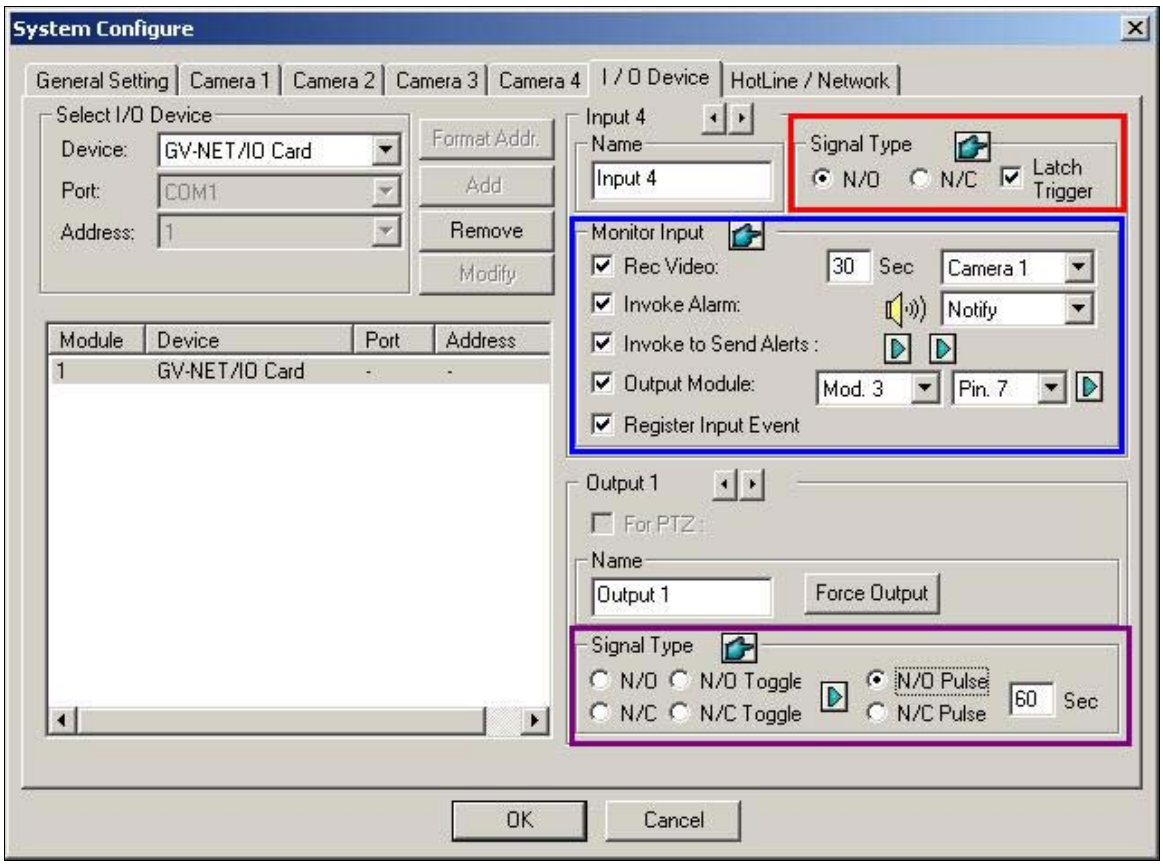


Figure 2-4

Application Example:

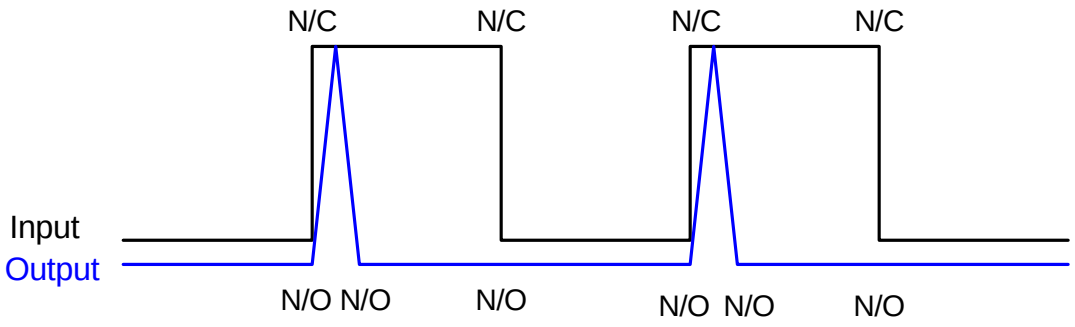
In the above scenario, Input 4 is set to N/O and Latch Trigger as well. When Input 4 is triggered:

- Camera 1 starts recording for 30 seconds and stops itself until the next input trigger (see the **Rec Video** option).
- Computer Alarm sounds once (see the **Invoke Alarm** option).
- The output (Module 3, Pin 7) is triggered simultaneously based on the Latch Trigger mode (see the illustrations below).

Following illustrations can help you understand different output signals (see Purple Square in the above dialog box) working with the Latch Trigger option.

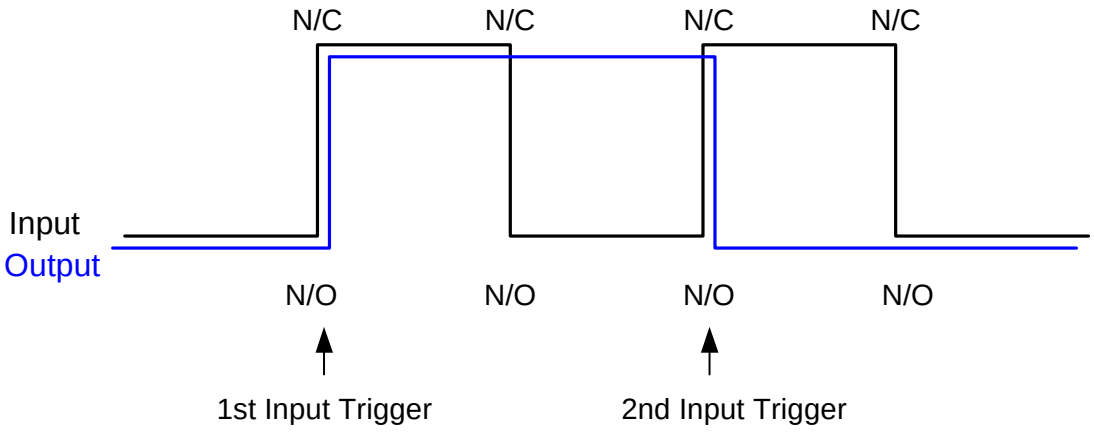
1. N/O (Normal Open) + Latch Trigger

Once the input triggers the output, the output will be triggered for a short moment and then turn off itself.



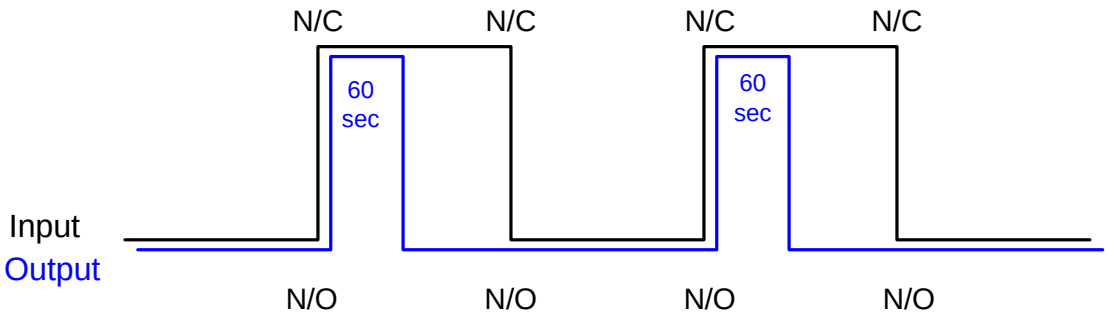
2. N/O Toggle + Latch Trigger

Once the input triggers the output, the output will keep triggering until a new input trigger.



3. N/O Pulse + Latch Trigger

Suppose you set the Pulse time to 60 second. Once the input triggers the output, the output will remain ON for 60 seconds before turning off itself.



Keeping Last Toggle Status

This feature can memorize the current output state when the monitoring is stopped or the system is restarted. For example, suppose the output is lights. When remaining on the premises, you stop monitoring but the triggered lights remain ON, not affected by the system state.

Setting up "Keep Last Toggle Status":

In the System Configure dialog box (see Figure 2-3), select **N/O Toggle** or **N/C Toggle**, click the **Arrow** button beside to check **Keep Last Toggle Status**.

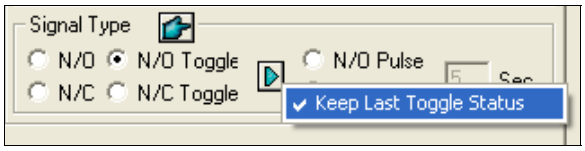


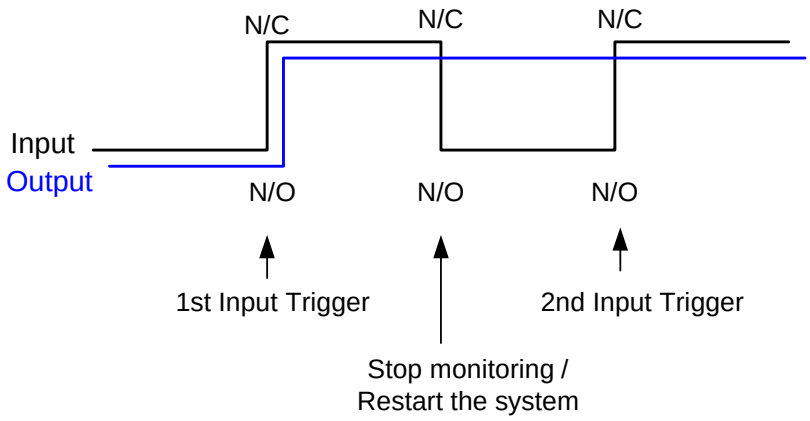
Figure 2-5

Application Example:

Following two illustrations help you understand how the input works with the output set to **Keep Last Toggle Status**.

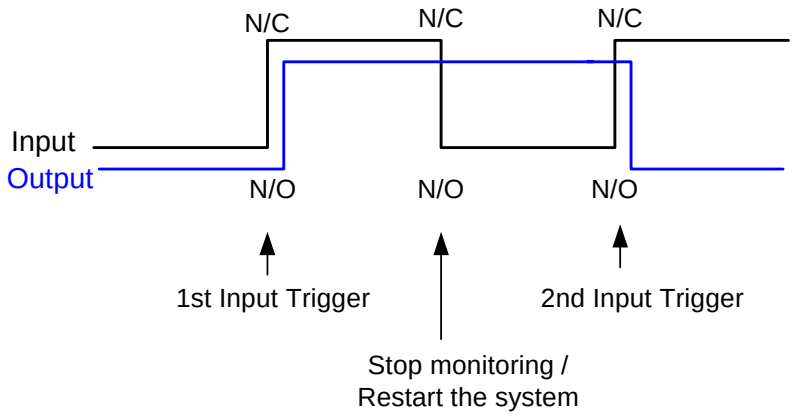
1. Input (N/C) + Output (N/O Toggle + Keep Last Toggle Status)

The triggered output remains ON even when you stop monitoring or restart the system.



2. Input (N/C + Latch Trigger) + Output (N/O Toggle + Keep Last Toggle Status)

When “Latch Trigger” works with “Keep Last Toggle Status”, the output only has a momentary trigger but also needs to remain ON even when you stop monitoring or restart the system. Therefore under the two conditions, the output turns off until a new input trigger.



I/O Control Panel

I/O control panel is used to control I/O devices that are added to the system. This control panel will not appear, unless at least one I/O device is connected to the system. To add and to configure a device, see *Setting Up I/O Devices* earlier in this chapter.

I/O Input Control Panel

After a device is added to the system, click the **I/O** button on the main screen to bring out the on-screen control panel for inputs and outputs (see Figure 2-6 and Figure 2-7). If only one I/O device is connected to the system, click the **I/O** button and select **Module 1** to bring up the control panel; if more than one I/O modules are connected to the system, clicking the **I/O** button will list all I/O modules connected to the system. Select one to bring out the control panel.

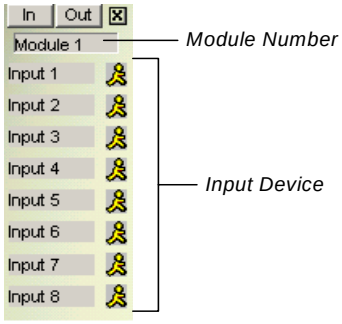


Figure 2-6 *Input Control Panel*

The input panel displays status of current input sensors. The “walking man” icon indicates the sensor is being triggered.

I/O Output Control Panel

Click the **Out** button to switch to the following output panel. Pressing an alarm icon will send an output signal to the corresponding relay.

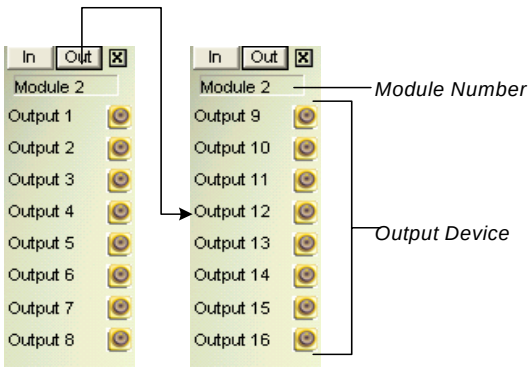


Figure 2-7 *Output Control Panel*

Moving PTZ Camera to a Preset Location upon Alarm Event

It is possible to direct a PTZ camera to a present location upon an alarm event. The setup determines how the PTZ camera moves to respond to an I/O-triggered event. Click the **Configure** button, and select **I/O Application Setting** from the menu to bring up the following dialog box.

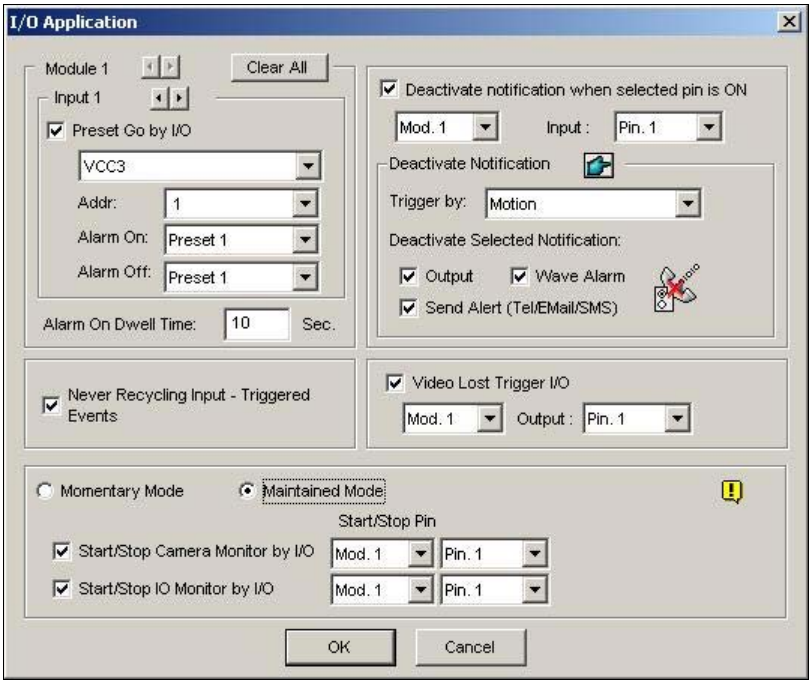


Figure 2-8 *I/O Application*

The options here allow you to specify how the PTZ camera, and the GV-System will respond to an I/O-triggered event. Click the **Arrow** buttons, and select a **module** and its **input** to set up.

- **Preset Go by I/O:** Enable the option and select your PTZ camera from the drop-down list.
- **Addr:** Specify the address of the PTZ camera.
- **Alarm On:** Turns the PTZ camera to a preset point when the input is triggered.
- **Alarm Off:** Returns the PTZ camera to a preset point when the triggered input is off.
- **Alarm On Dwell Time:** Specify the amount of time the PTZ camera stays at “Alarm On” preset point, before returning to the “Alarm Off” preset point.

[Never Recycling Input-Triggered Events] When the item is checked, the files of input-triggered events won’t be recycled by the system when disk space is full.

[Video Lost Trigger I/O] Activates the specified output module if any camera loses its video signal.

[Momentary Mode] Pushbutton switches that are normally open and stay closed only as long as the button is pressed. Momentary switches allow turn-on or turn-off from multiple locations. For example, certain premises have a designated entry/exit door. When the staff enters the entry door, the system starts monitoring. When the staff leaves from the exit door, the system stops monitoring.

[Maintained Mode] Push-on/push off button switches that stay open until thrown, and then stay closed until thrown again. Maintained switches are convenient for only one switch location.
For example, in the business hour when the door is opened, the system stops monitoring; in the non-business hour when the door is closed, the system starts monitoring.

Deactivating Alarm and Alert Settings

The option lets you instantly deactivate all the prior alarm and alert settings (Output, Wave Alarm, Send Alerts), when an assigned input module is triggered. Open the I/O Application window (refer to Figure 2-8), and find the following section.

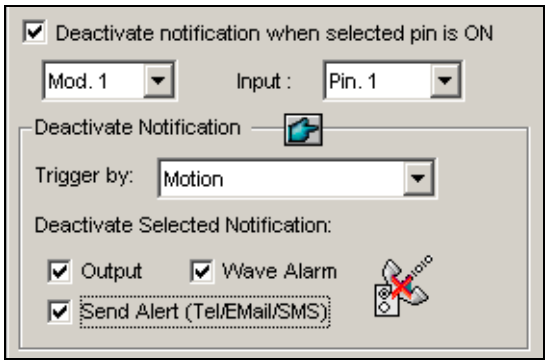


Figure 2-9

[Deactivate notification when selected pin is ON] When an assigned input module is activated, all designated alarms and alerts will be disabled. Assign an installed input module and a pin number for the application.

[Deactivate Notification]

- **Triggered by:** Select an alert condition from the drop-down list for the application. For example, if you choose Motion, all designated alarms and alerts upon motion detection will be deactivated when an assigned input module is activated.
- **Deactivate Selected Notification:** Select the alarms and alerts you want to be deactivated, such as Output, Wave Alarm and/or Send Alert, when the assigned input module is activated.

Detecting Input State

This feature is designed to monitor all inputs for a change of state whenever you start I/O monitoring. A change from the defined state (N/O to N/C or N/C to N/O) can activate an alarm condition, e.g. a warning light or buzzer.

1. On the main screen, click the **I/O** button, and then select **Detect Input Status**. This dialog box appears.

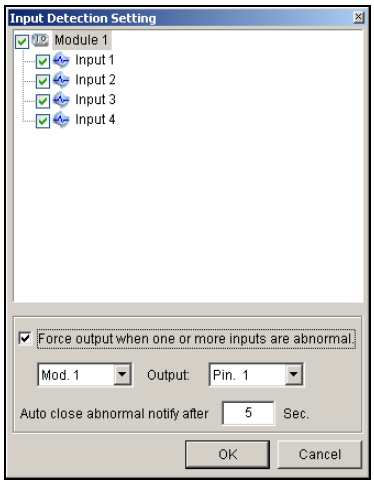


Figure 2-10

2. Check the Input(s) you want to monitor.
3. For any state change, you can trigger an alarm output by checking **Force Output when one or more inputs are abnormal**, and assigning the output module and pin number.
4. When the state change is detected, a warning message will pop up on the screen. In the **Auto close abnormal notify after x sec** field, you can define the duration of the message to close itself automatically.

After settings, you can manually detect all input states by selecting **Detect Input Status**. Or, you can just start I/O monitoring. When the system detects any change of input state, you may see this warning message:

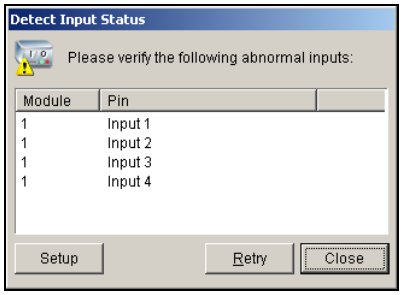


Figure 2-11

I/O Enable Setting

You can manually arm or disarm any I/O devices without interrupting the monitoring. For example, when an output alarm is triggered at the front door, you can turn off the specific output while the system keeps on recording and I/O monitoring.

Arming / Disarming I/O devices:

1. On the main screen, click the **I/O** button, and select **I/O Enable Setting**. This dialog box appears.

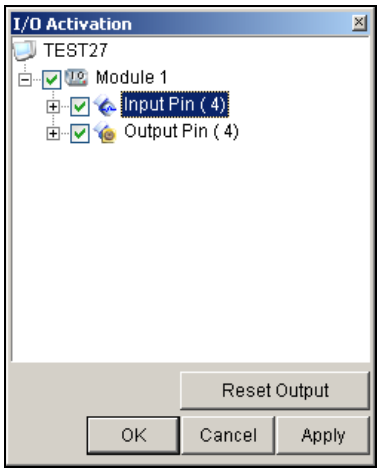


Figure 2-12

2. Check the Input/Output to arm or uncheck the Input/Output to disarm the device(s). Then click **Apply** to verify the changes.

Advanced I/O Panel

The Advanced I/O Panel provides a centrally managing solution for I/O devices installed across a wide area. It simplifies the process of configuring and managing many I/O devices. Its major features are:

- Trigger I/O devices without starting I/O monitoring
- Group I/O devices for cascade triggers
- Monitor different I/O cascade configurations at different times of the day
- Quickly access triggered I/O devices by a Quick Link window

The Advanced I/O Panel

To open the panel, click the **I/O** button on the main screen, and then select **Advanced I/O Panel**.

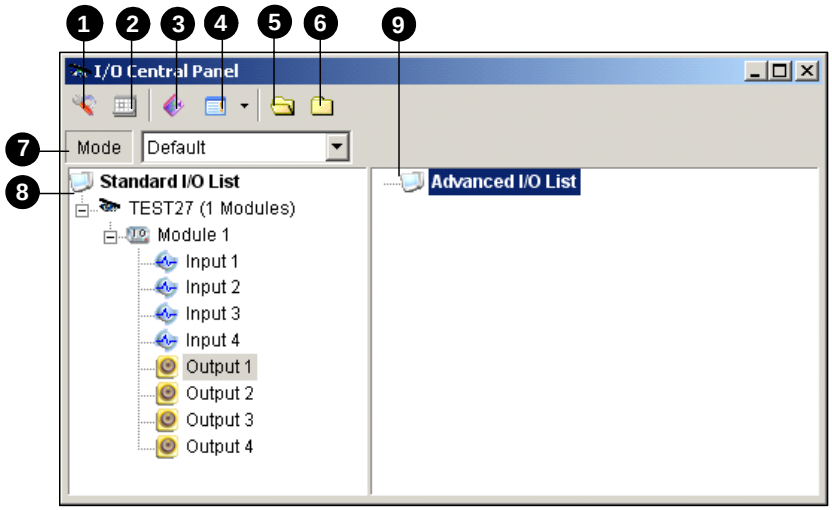


Figure 2-14

The controls on the Advanced I/O Panel:

No.	Name	Description
1	Configure	Accesses Panel and Schedule settings.
2	Mode Schedule	Starts/stops Mode Schedule.
3	Toggle Quick Link	Displays the Quick Link window for quick access to triggered I/O devices.
4	Advanced I/O List Style	Displays the Advanced I/O List in various styles: View/Edit, Icon and Detail.
5	Expand Tree Row	Expands tree branches.
6	Collapse Tree Row	Collapses tree branches.
7	Mode	Configures various cascade modes.
8	Standard I/O List	Displays connected I/O modules.
9	Advanced I/O List	Groups I/O devices in cascade mode.

Creating a Group for Cascade Triggers

You can group I/O devices by function or geography. Further, the group allows cascade triggers, meaning that the trigger actions of one trigger can activate another trigger.

For example, you might have a group called “Entrance” that contains all I/O devices installed at entrances. The “Entrance” group might contain other sub groups, each of which contains just the related I/O devices in various geographic locations:

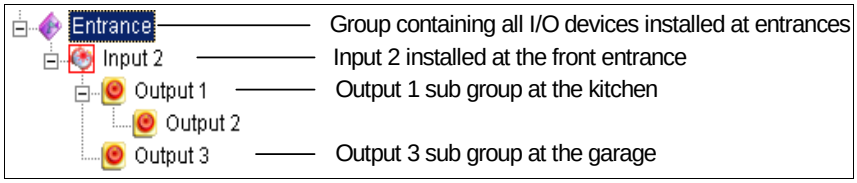

Entrance
Group containing all I/O devices installed at entrances
Input 2
Input 2 installed at the front entrance
Output 1
Output 1 sub group at the kitchen
Output 2
Output 3
Output 3 sub group at the garage

Figure 2-15

When Input 2 is triggered, it will trigger Output 1 and Output 3 sub groups, and Output 1 will trigger Output 2 in a cascade series.

Creating a Group:

1. Right-click on **Advanced I/O List**, and then select **Add A Group**. This dialog box appears.

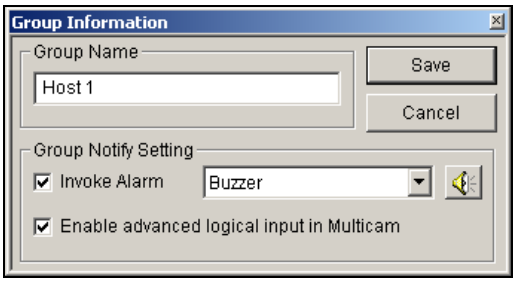


Figure 2-16

- **Group Name:** Names the group.
- **Invoke Alarm:** Invokes the computer alarm on I/O trigger. Select a sound from the drop-down list.
- **Enable advanced logical input in Multicam:** See *Setting Advanced Logical Input Status* later in this chapter.

2. Click **Save** to apply the settings, and return to the panel.
3. To create a cascading hierarchy, drag the desired inputs/outputs from the left **Standard I/O List** to the group.

Note: In the cascading hierarchy, each input can only be used once while the same output can be used repeatedly.

Editing a Group:

To modify group settings, right-click a group, and select **View/Edit**. This dialog box appears.

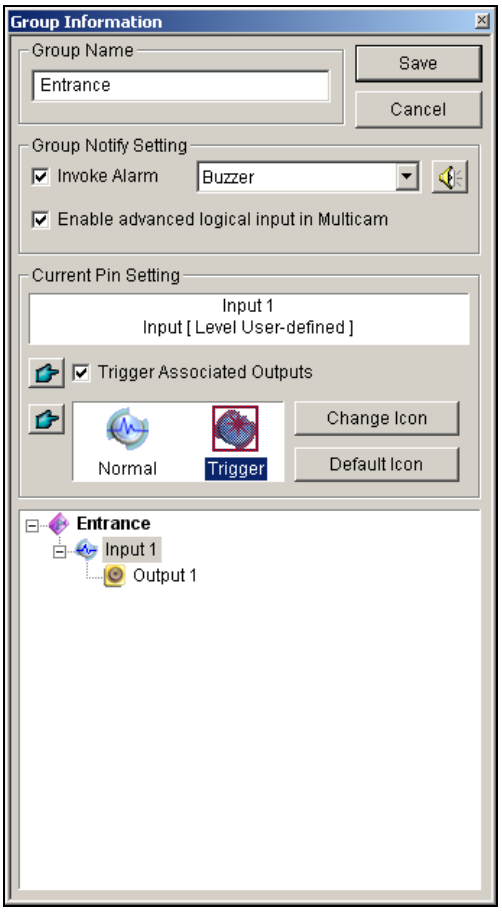


Figure 2-17

[Group Name] As described in *Figure 2-16.*

[Group Notify Setting] As described in *Figure 2-16.*

[Current Pin Setting] To enable this option, highlight an I/O device from the group list at the bottom.

- **Trigger Associated Outputs:** Triggers outputs in cascade mode. Click the **Finger** button to apply the change to all I/O devices at the same group.
- **Change Icon:** To enable this option, select one of two displayed icons: Normal or Trigger. Click the **Change Icon** button to change an icon. Click the **Finger** button to apply the change to all I/O devices at the same group.

Editing an I/O Device

In addition to editing groups, you can also edit the settings of individual I/O device. Right-click an I/O device, and select **Setting**. This dialog box appears.

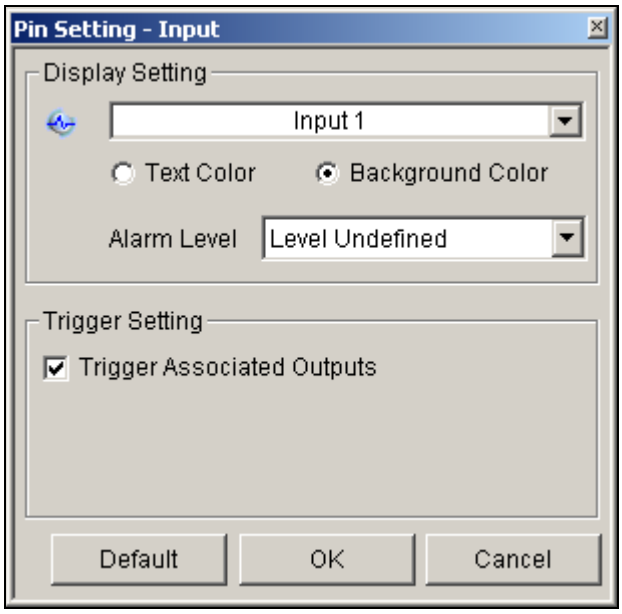


Figure 2-18

[Display Setting] You can define the nature of I/O devices by colors. Note that the setting only affects the **Detail** style of the Advanced I/O List (No. 4, Figure 2-14).

- **Alarm Level drop-down list:** Click the **Alarm Level** drop-down list, and select one of the six default colors: Fire, Smog, Vibration, Intruder, Motion and Emergency. For the Level Undefined option, select **Text Color** or **Background Color**, and then click the Input/Output drop-down list to change its color.

[Trigger Setting]

- **Trigger Associated Outputs:** Triggers outputs in cascade mode (see *Creating a Group for Cascade Triggers* above).

Configuring the Advanced I/O Panel

On the panel toolbar, click the **Configure** button, and select **Panel Setting**. This dialog box appears.

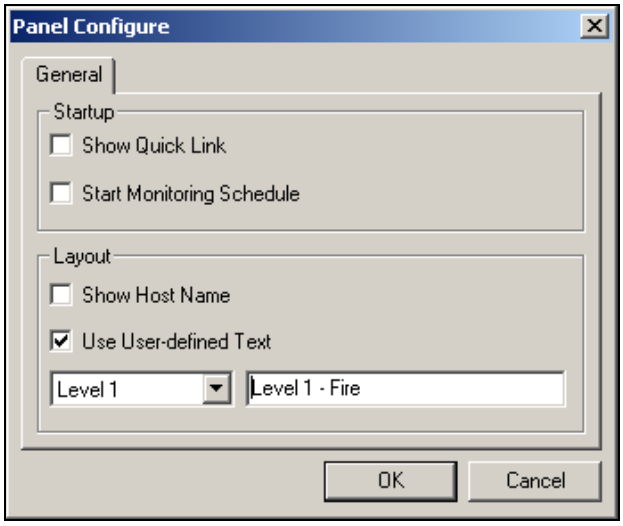


Figure 2-19

[Startup]

- **Show Quick Link:** Opens the Quick Link window at panel startup.
- **Start Schedule Monitoring:** Starts Mode Schedule at panel startup. For details, see *Setting up Mode Schedule* below.

[Layout]

- **Show Host Name:** Displays the host name of each I/O device on the Advanced I/O List.
- **Use User-defined Text:** Allows you to modify the text of Alarm Level (see Figure 2-18).

Setting Up Mode Schedule

The Mode Schedule allows you to monitor different I/O cascade configurations at different time. For example, you may want I/O cascade triggers one way during business hours and another way for non-business hours. Modes can be switched automatically at a scheduled time.

Creating a Mode:

1. Click the Mode drop-down list (No. 7, Figure 2-14), and select **More Edit**. This dialog box appears.

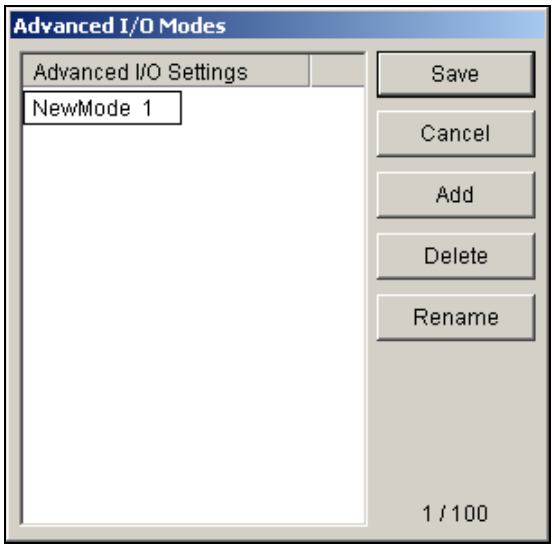


Figure 2-20

2. Click **Add**, and name the created mode. You can create up to 100 modes.
3. Click **Save** to return to the panel.
4. Select the created mode from the **Mode** drop-down list, and create the groups in the Advanced I/O List. For details, see *Creating a Group for Cascade Triggers*.

Creating a Mode Schedule:

Define the times and days you like the panel to switch modes.

1. On the panel toolbar, click the **Configure** button, and select **Schedule Setting**. This dialog box appears.

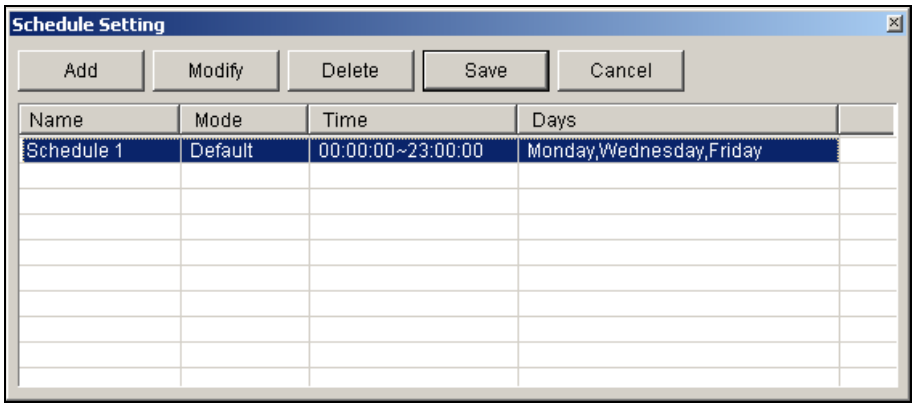


Figure 2-21

2. Click **Add** to create a schedule. This dialog box appears.

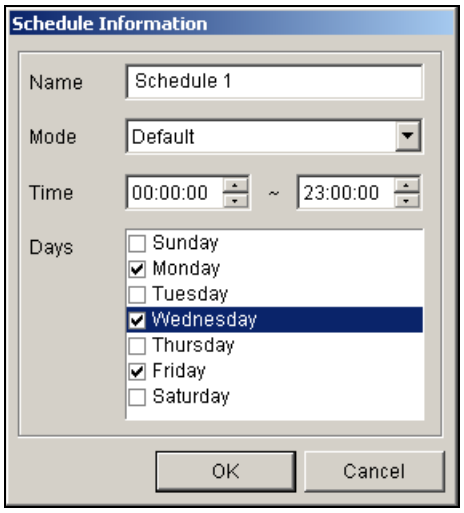


Figure 2-22

- **Name:** Type a name for the schedule.
- **Mode:** Select a mode from the drop-down list.
- **Time:** Define a time period you want the mode to run.
- **Days:** Check the day(s) you want the mode to run.

3. Click **OK** to apply the settings, and click **Save** to return to the panel.
4. To start the mode schedule, click the **Mode Schedule** button (No. 4, Figure 2-14), and then select **Mode Schedule Start**.

Quick Link

The Quick Link provides a quick access to triggered I/O devices. It is a separate window to display all group icons. The group icon flashes when any included I/O device is triggered. Clicking the flashing icon will bring you to the I/O location in the Advanced I/O List.

- To open the Quick Link window, click the **Toggle Quick Link** button. (No. 3, Figure 2-14).
- To set the Quick Link window at panel startup, see the **Show Quick Link** option in Figure 2-19.

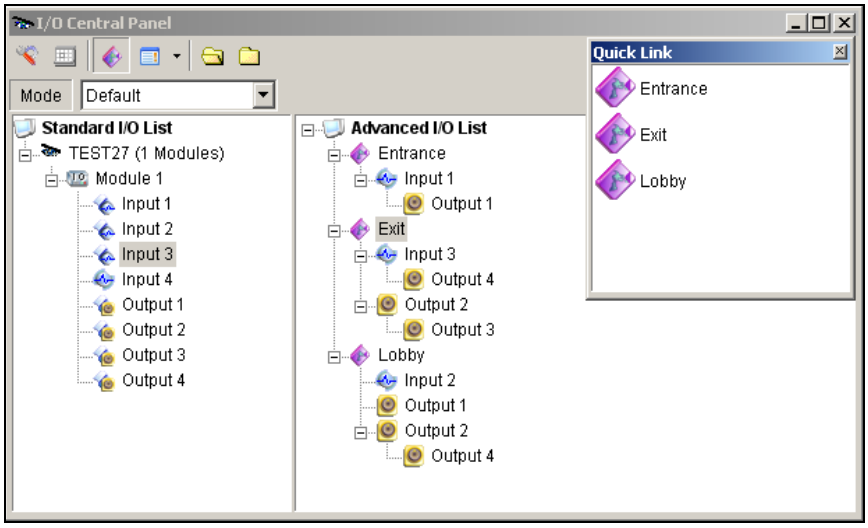


Figure 2-23

Forcing Output

To manually force an output, click one output, and select **Force Output**.

- In the Standard I/O List, you can force the output individually.
- In the Advanced I/O List, considering cascade triggers, you can only manually force the output at the top level, e.g. Figure 2-24. Other outputs at sub levels cannot be forced manually, e.g. Figure 2-25.

  However, if the output is not in a cascading hierarchy, you can definitely force it manually, e.g. Figure 2-26.

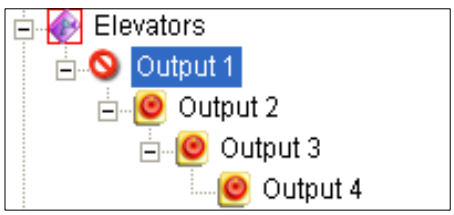


Figure 2-24

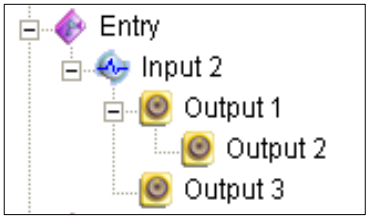


Figure 2-25

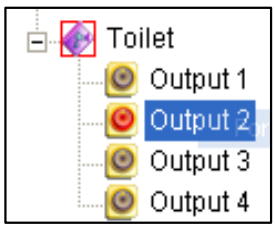


Figure 2-26

Editing Background Image

With the Background Image feature, you can import a floor plan to lay out the locations of triggered I/O devices. This feature works in the **Icon** style of the Advanced I/O List.

1. To switch to the Icon style, click the **Advanced I/O List Style** button (No. 4, Figure 2-14) and then select **Icon**.
2. Select a group in the Advanced I/O List. The I/O icons of this group will be displayed.
3. Right-click on the right screen, and select **Background Image** to import a graphic file.
4. Right-click on the right screen, and uncheck **Auto Arrange**. Now you can freely drag the I/O icons to the desired locations on the imported map.
5. To add images to another group, repeat the steps 2 to 4.

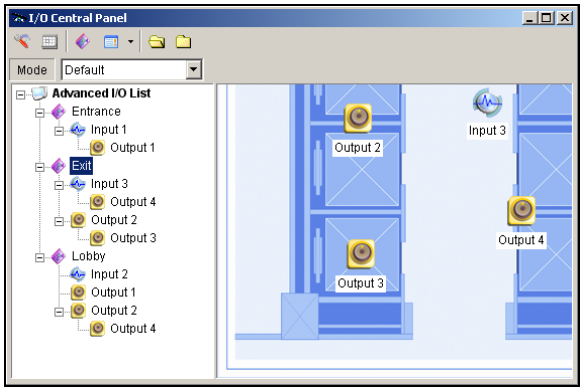


Figure 2-27

Note: Highlighting **Advanced I/O List** in the Advanced I/O List, you can import another image.

System-Wide Triggers

The System-Wide feature gives privileges to remote applications, such as Center V2 and VSM, to force the outputs in the Main System for cascade triggers.

For this example, the System-Wide feature is enabled in Output 1. When the VSM operator manually forces Output 1, Output 2, 3 and 4 will be triggered in a cascade series. If the System-Wide feature is disabled, the operator can only force Output 1 without cascade triggers.

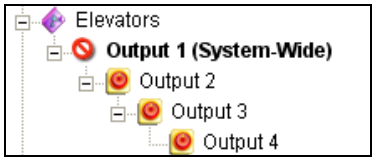


Figure 2-28

To enable this feature, right-click an output at the top level, and then select **System-Wide Output**.

The "Advanced Logical Input Status in Mutlicam" Option

If you already set a specific input to trigger a specific output in the Main System, you can decide whether to apply the simple input-trigger-output setting in the Advanced I/O Panel.

For example, you have set a simple access system in the Main System: Input 2 (card reader) triggers Output 3 (the door opens).

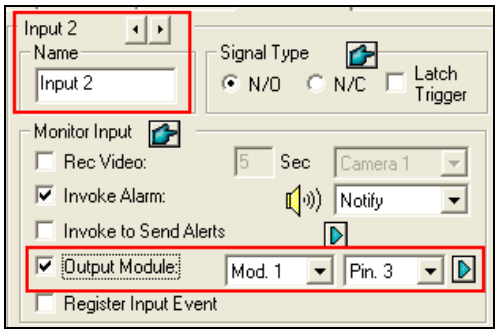


Figure 2-29

But to tighten security, you may set a group "Garage" in the Advanced I/O Panel. Both Input 1 (power switch) and Input 2 (card reader) should be activated together to trigger Output 1 (light), Output 2 (alarm) and Output 3 (the door opens) in a cascade series. Simply activating Input 2 (card reader) shouldn't cause any output triggers in the cascading hierarchy.

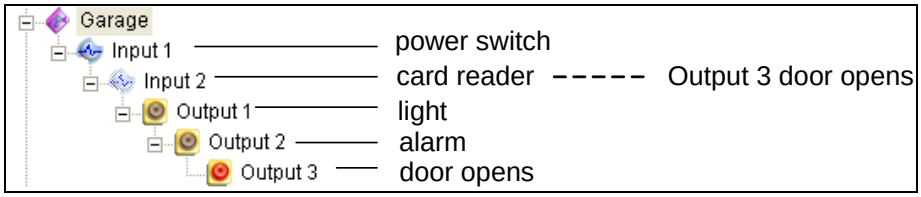


Figure 2-30

So now you have the options:

- At default, the simple input-trigger-output setting is applied at the Advance I/O Panel when **I/O monitoring** is activated. For this example, Input 2 will trigger Output 3.
- To only apply the cascade triggers set in the Advanced I/O Panel and ignore the simple input-trigger-output setting, enable **Use adv. Logical input result as input status** from the I/O icon on the main screen and **Enable advanced logical input in Multicam** from a certain group (see Figure2- 16) together.
- To switch to the simple input-trigger-output setting, just disable **Enable advanced logical input in Multicam**.

Managing a Group of I/O Devices

With groups of I/O devices set up on the I/O Advanced Panel, you can enable or disable these I/O devices by groups.

Enabling a Group

On the I/O Advanced Panel, right-click a desired group and select **Start Monitoring**. All input devices of this group are now enabled. When inputs are triggered, outputs will be activated in cascade mode.

Disabling a Group

On the I/O Advanced Panel, right-click a desired group and select **Stop Monitoring**. All input devices of this group are now disabled. No cascade triggers will occur.

Pausing the Triggered Inputs

This feature is designed for a group of outputs set to be Toggle mode. When inputs activate outputs in cascade triggers, right-click this group and select **Pause Monitoring**. The inputs of the group will be reset, but the outputs keep on alarming.

Note: With the **System-Wide Output** option (see *System-Wide Triggers* above) activated, you cannot use these three options to manage a group of I/O devices.

CHAPTER 3

Point-Of-Sale (POS) Application

A POS system may be integrated to a GV-System through the GV-Data Capture box. Through the integration, you can investigate a transaction with transaction data overlaying on video footage, by either live viewing or playing back.

POS System Connection

POS systems vary in different forms, with a receipt printer attached internally or externally (also called cash register), and with the text or graphic mode.

For the information on attaching the text-mode POS system to GV-System, visit the related links below.

To access	Visit
DB9 Interface POS System	http://www.geovision.com.tw/english/faq/POSflowchart/text/DB9_POS.pdf
DB25 Interface POS System	http://www.geovision.com.tw/english/faq/POSflowchart/text/DB25_POS.pdf
DB9 Interface Cash Register	http://www.geovision.com.tw/english/faq/POSflowchart/text/DB9_cash.pdf
DB25 Interface Cash Register	http://www.geovision.com.tw/english/faq/POSflowchart/text/DB25_cash.pdf

To attach the graphic-mode POS system to GV-System, first check if your POS system has these two characteristics:

- Windows operation system
- Serial port (COM port) for output

For the application of the graphic-mode POS system, you need:

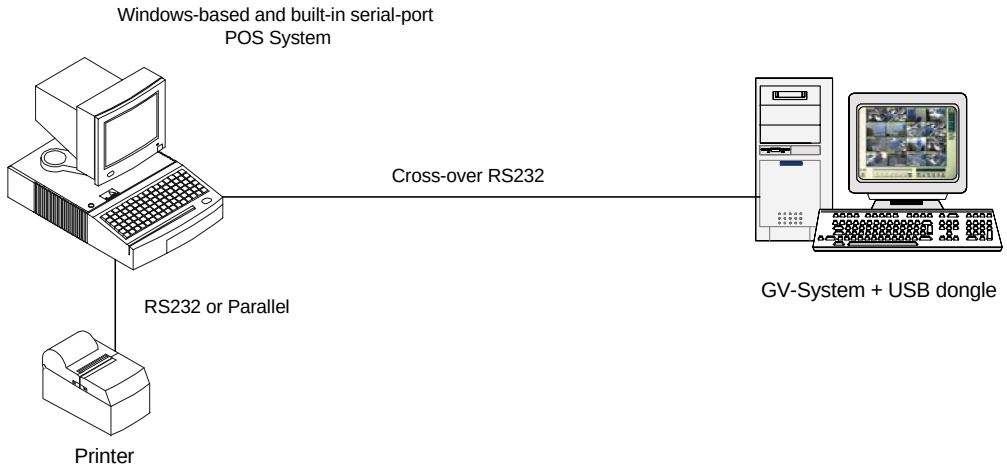
- Additional USB dongle
- *POS Data Sender* program. (Included in the Surveillance System Software CD)

If you are not sure about the printing mode of your POS system, refer to *The Printing Mode of POS System/Cash Register* at this link:
http://www.geovision.com.tw/english/faq/POSflowchart/The_printing_mode_of_POS_system_cash_register.pdf

POS Data Sender

To attach the graphic-mode POS system with the Windows operation system and serial output to GV-System, follow these steps:

1. Connect the POS system as illustrated below.



2. Insert the Surveillance System Software CD to the POS system. It will run automatically, and a window appears.
3. Select the **Install V 8.0.0.0 System**.
4. Select the **Software POS Driver (Only for Graphic mode POS System)**, and follow on-screen instructions to complete the installation.
5. Go to **Windows Start**, point to **Programs**, select **DVR-POS**, and then click **DVR POS Driver**. The following window appears.

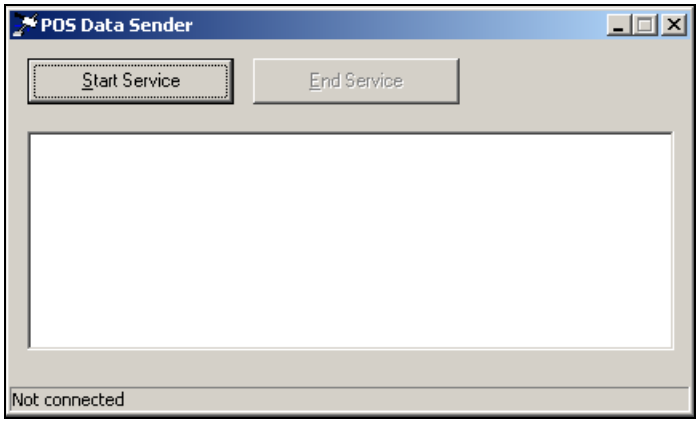


Figure 3-1 *POS Data Sender*

6. Click **Start Service**, and then select the COM port to send graphic data to the GV-System.

Note: The GV-System must be configured and ready for this application. To set up the GV-System, see *Setting a POS System* below.

Setting a POS System

To connect a POS system to GV-System, follow these steps:

1. Click the **Configure** button, point to **POS Application Setting**, and then select **POS Device Setup**. The POS Sever Setup window appears.

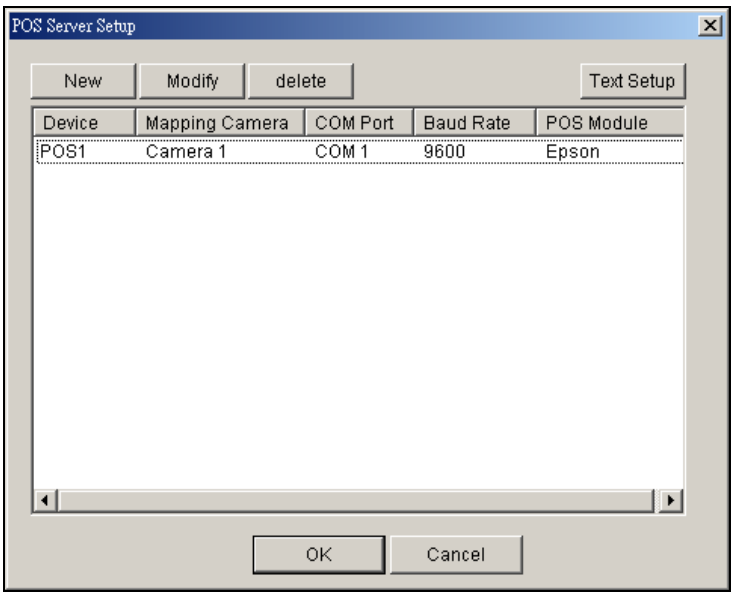


Figure 3-2 *POS Server Setup*

2. Click the **New** button in the upper part of the window. The following dialog box appears.

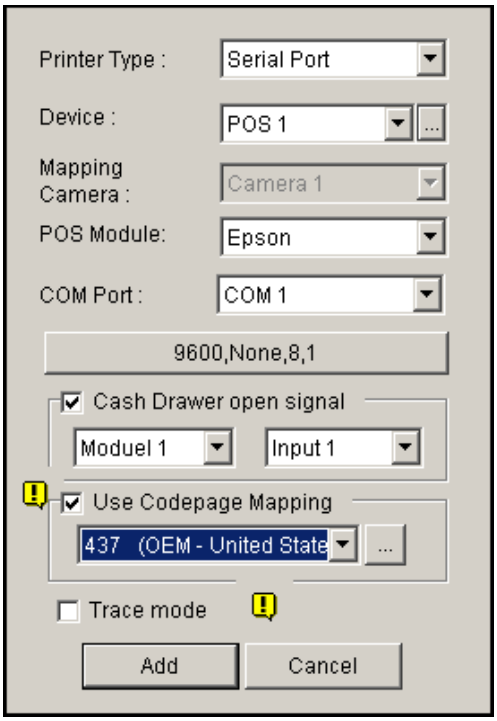


Figure 3-3 *POS system settings*

- **Printer Type:** Select Serial Port, Parallel Port or TCP/IP Port that the POS system belongs to.
  For TCP/IP Port applications, see *GV-Data Capture V2E User's Manual*.
- **Device:** Assign the POS system to a camera screen. POS 1 displays the images and data on the Camera 1 screen; POS 2 on the Camera 2 screen, and so on. Click the **[…]** button next to the item to rename the device.
- **POS Module:** Select the printer attached to the POS system. If it's not Epson, select General for other brands. If the printing is in the graphic mode, choose GraphMode.
  For Graphic mode applications, see the *POS System Connection* section above.
- **COM Port:** Select the COM port that the POS system is connected to.
- **The parameter button:** Click the button to configure Baud Rate, Data Bits, Parity, and/or Stop Bits to match those of the POS system, or keep them as defaults.
- **Cash Drawer Open Signal:** This option is only available when an input module is configured in the Main System. Assign the input module connected to the cash drawer. Every time when the cash drawer is opened, a signal will be sent to the Main System and recorded in System Log for later retrieval.
- **Use Codepage Mapping:** This feature is to support special characters and symbols display. For details, see *Codepage Mapping*.
- **Trace Mode:** Check this item only after getting the recommendation from our technical support staff.

3. After above settings, click **Add** to add the POS system to the Main System.

Superimposing POS Data onto Camera Screen

Follow these steps to set camera screens with POS text data:

1. Open the POS Device Setup window. Refer to Figure 3-2.
2. Click the **Text Setup** tab to set text font and position of the data.

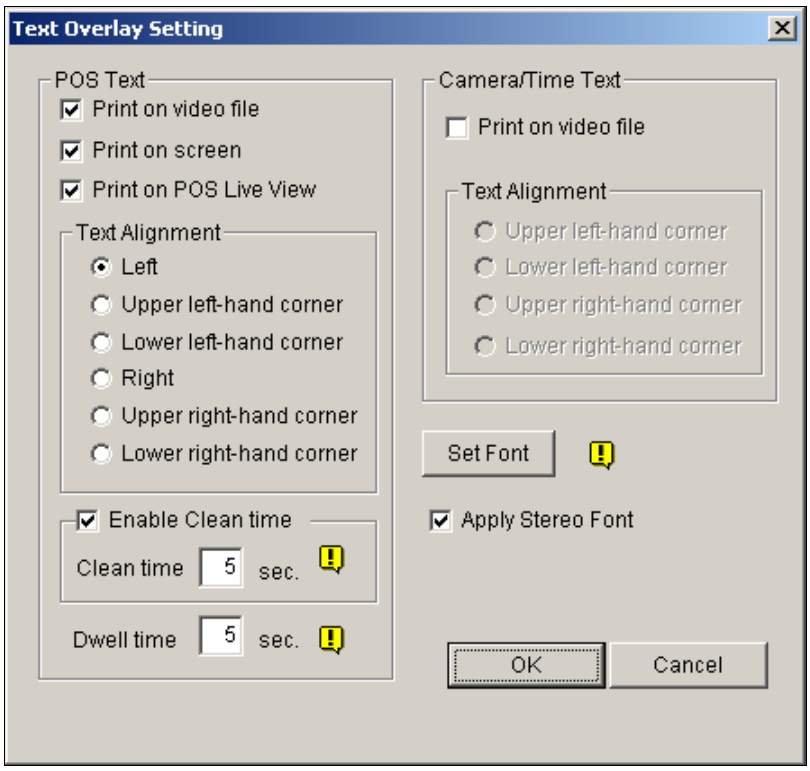


Figure 3-4 *Text Overlay Settings*

[POS Text]

- **Print on video file:** Enable this option to display POS data on the recorded video file.
- **Print on screen:** Enable this option to display POS data on the transaction scene.
- **Print on POS Live View:** Enable this option to display POS data on the POS Live View window.
- **Text Alignment:** Select how you want POS data to be aligned on a view screen.
- **Enable clean time:** When the option is enabled, after the specified time in seconds that if GV-System hasn't received the transaction data from your POS system, the already-displayed data will disappear from the camera screen, i.e. the cashier stops entering the transaction data.
- **Dwell time:** Specify the amount of time in seconds that POS data stays on a view screen before the next transaction.

[Camera/Time Text]

- **Print on video file:** Enable this option to display camera ID and location name on the recorded video file.
- **Text Alignment:** Select how you want the camera information to be aligned on a view screen.

[Set Font] Click the **Set Font** button to set up the font for POS and Camera/Time text. The option **Apply Stereo Font** makes texts stand out from the background by giving white-edge to the texts.

POS Field Filter

POS Field Filter allows you to create a column of a transaction item in System Log. It further filters the transaction conditions based on your criteria, and displays the results under the created column. To set up the function, follow these steps:

1. Click the **Configure** button, point to **POS Application Setting**, and then select **POS Field Filter**. The following window appears.

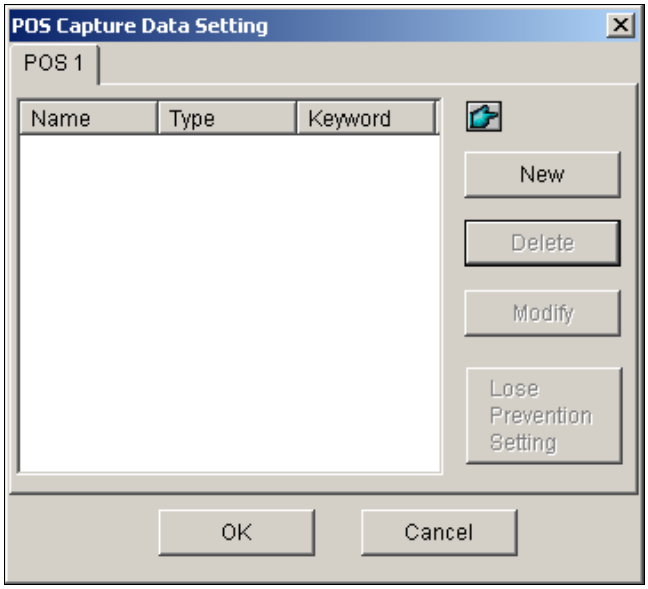


Figure 3-5 *POS Capture Data Setting*

2. Click the **New** button. The following dialog box appears.

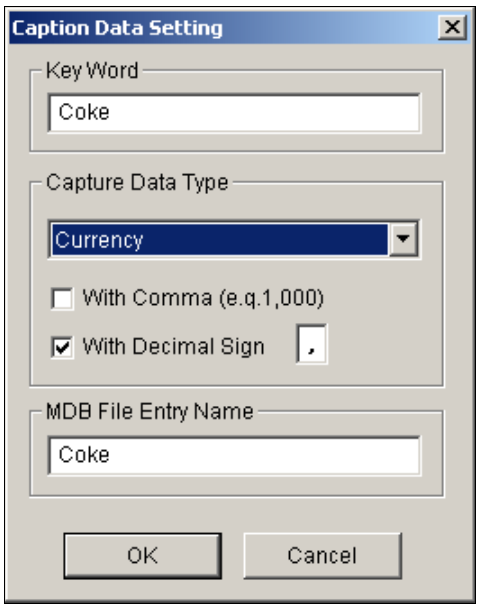


Figure 3-6 *Setting search criteria*

[Key Word] Enter a meaningful keyword that matches exactly one of transaction items/texts in the receipt. The field is case sensitive. Suppose we enter Coke. Every text matching to Coke will be screened out.

[Capture Data Type] Select the type of data followed by the specified transaction item/text: **Numeric, Currency or Alphabetic**. If the specified transaction item/text is followed by a price amount, choose Numeric or Currency. If it is followed by alphabets, choose Alphabetic.

- **With Comma:** If there are commas in a price amount, check the option.
- **With Decimal Sign:** If there are decimal signs in a price amount, check the option.
- **With Space:** The option is only available when you choose Alphabetic. If there is space among a series of characters, check the option.

[MDB File Entry Name] Enter a file name to store the data.

3. Click **OK** to apply the above settings.
4. Open System Log.

In System Log, for this example, you can see the last column created for the transaction item Coke. The transactions matching the search criteria will be displayed under the created column.

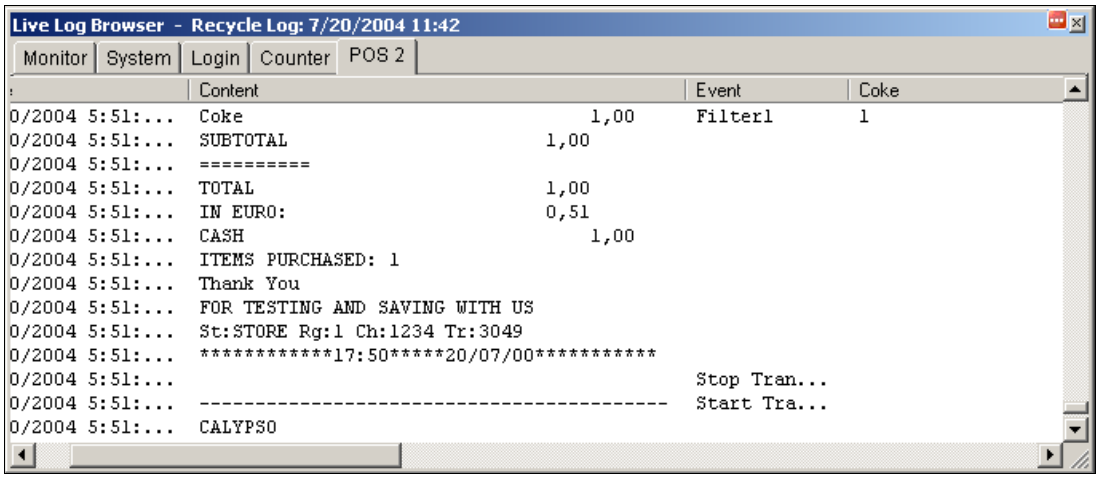


Figure 3-7 *A created column in System Log*

Abnormal Transaction Alerts

When an abnormal transaction of the specified transaction item occurs, this function can automatically activate the output device and send out assigned E-Mail/SMS/Pager alerts. To set up this function, follow these steps:

1. Click the **Configure** button, point to **POS Application Setting**, and then select **POS Field Filter** to display the POS Capture Data Setting window. See Figure 3-5.
2. Click the **Loss Prevention Setting** button to display the following dialogue box.

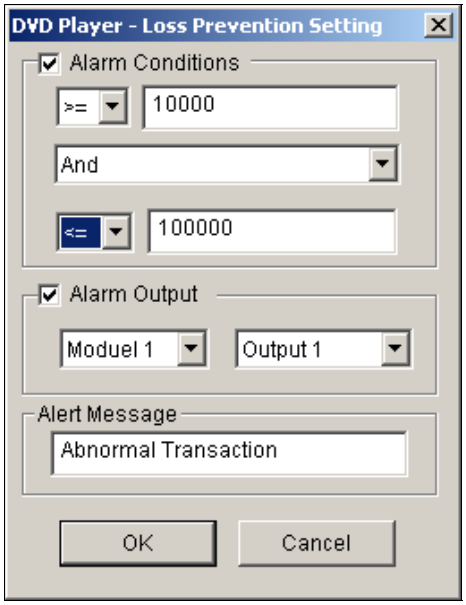


Figure 3-8 *Loss Prevention Setting*

[Alarm Conditions] Check this option and define the price range for an alarm condition. For this example, when the price amount in a transaction is *great than or equal to* (>=) 10000 and *less than or equal to* (<=) 100000, the assigned alarm will be activated.

[Alarm Output] Assign an installed output module for the application.

[Alert Message] Enter a desired alert message. To set up a notification type (E-Mail/Hotline/SMS), refer to *Send Alerts Approach* in Chapter 1.

Codepage Mapping

This feature is to support special characters and symbols display. When your transaction text appears on the screen incorrectly, your POS system may use different character code from GV-System's. To change a character code, follow these steps:

1. In Figure 3-3, enable **Use Codepage Mapping**, and then select a character code from the drop-down list.

   Note: The codepage is related to "Script" in the **Set Font** option (see Figure 3-4). When this option is disabled, it means there are no codepages matching your script setting.

2. To verify the character code you selected, click the **[…]** button to preview its codepage.

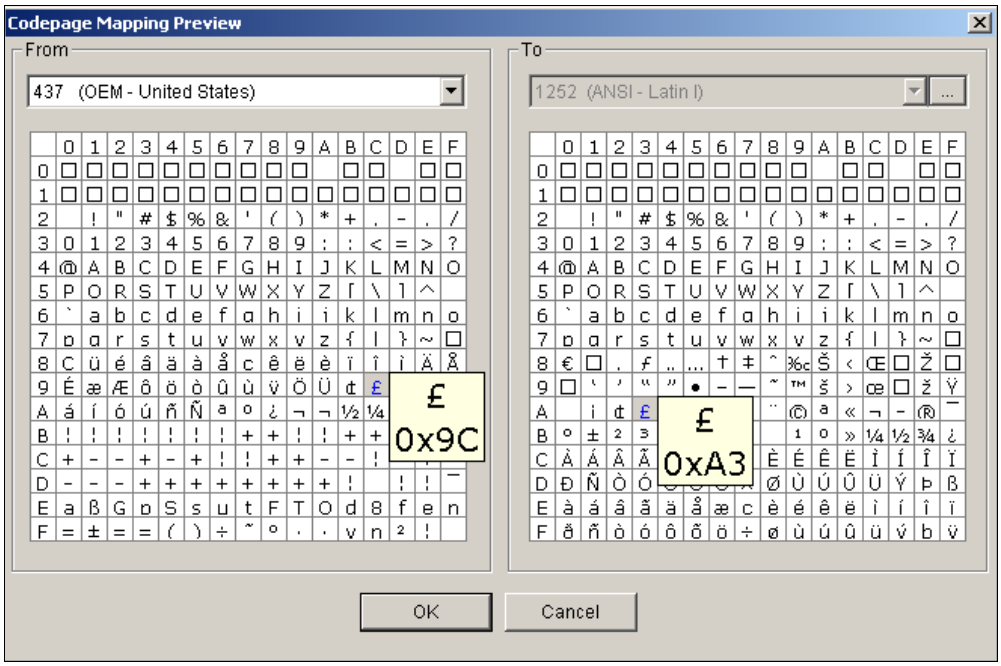


Figure 3-9 *Codepage Mapping Preview*

3. At the From side, locate and click one of the symbols or characters that couldn't display correctly. For this example, you can see its previous character code (From side: Ox9C) has been transferred to the default equivalent (To side: OxA3).

Searching POS Data

You can locate any desired POS data and videos during a transaction. In the Main System, click the **ViewLog** button and then select **Search POS Data** to display the Quick Search window. When the Quick Search starts, the latest transaction video and data will always be displayed. For the Quick Search feature, see Figure 4-16 in Chapter 4

POS Live View

The POS Live View can display transaction data in a separate window instead of overlaying data on the main screen. It features:

- Fast access to transaction data without opening System Log.
- The View is designed for high screen resolution of 1280 x 1024. When your monitor supports 1280 x 1024 and the main screen is set to 1024 x 768, you can juxtapose the main screen and the POS Live View.

The POS Live View Window

On the main screen, click the **ViewLog** button, and then select **POS Live View**.

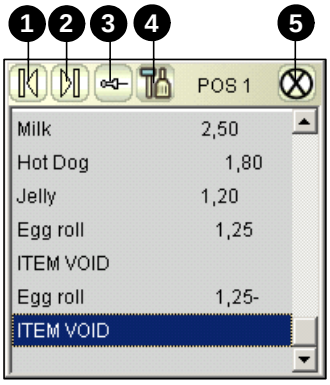


Figure 3-10

The controls in the POS Live View Window:

No.	Name	Description
1	Previous Transaction	Goes to the previous transaction data.
2	Next Transaction	Goes to the next transaction data.
3	Freeze	Suspends the current transaction data display. Clicking this button again will restore to the live display.
4	Live View Menu	Accesses the settings of POS Live View.
5	Exit	Closes the POS Live View window.

Setting Up Live View

To change the display status on the POS Live View window, click the **Live View Menu** button (No.4, Figure 3-10) and select **Live View Setup**. This dialog box appears.

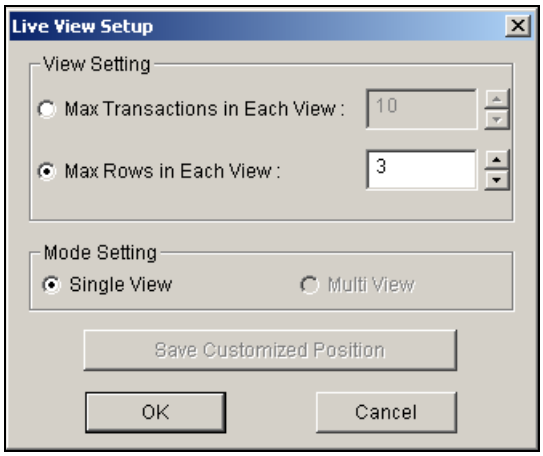


Figure 3-11

[View Setting]

- **Max Transactions in Each View:** Enter the number of transactions you want to keep on the POS Live View window. For example, if you enter 99, there are always 99 transactions kept on the window. When the 100th transaction is entered, the oldest transaction data will be deleted to remain the max. transaction number to 99.
- **Max Rows in Each View:** Enter the number of transaction rows you want to keep on the POS Live View window, which includes any materials printed by POS System, e.g. data and time.

[Mode Setting]

Select one single POS Live View window or multiple windows to display on the screen.

- **Save User Define Arrange Position:** Allows you to freely place the multiple windows on the screen. To use this feature:

  (1) Drag the windows to the desired places on the screen.

  (2) Open the Live View Setup dialog box, and click this option. When this warning message appears: *Are you sure to save User Define Arrange Position?*, click **Yes** to save your arrangement.

  Whenever you want to place the POS Live View windows as your previous arrangement, click the **Live View Menu** button, point to **Arrange Views**, and select **Custom View**.

CHAPTER

4

Playing Back Video Files

Recorded files can be played back using five different software applications offered by the system – ViewLog, Quick Search, Remote Playback System, Remote Playback System WebCam version, and Q-View. Following is a comparison table for these applications. This is not a complete comparison table, because many of these features are dealt with in details throughout the manual. However, this table may help you to decide which application to use under a given situation.

Application	Description
ViewLog	Plays back video files on the servers and computers within the LAN, as well as supporting the Backup function.
Quick Search	A more convenient tool that allows you to search video files recorded on motion, alarm, or POS events.
Remote Playback System	Plays back files through network connection. Offers most complete playback features among the five. This application is a management system itself. It can download and play back history video files from several servers over Internet. See *Playing Back over Internet Using Remote Playback,* later in this chapter.
Remote Playback System WebCam version	No additional software installation is necessary. Just play back by your web browser. See *Remote Playback on WebCam* in Chapter 6.
Q-View	Plays back files saved at the remote site. It comes with the installation of any GV remote applications (Remote View, IP Multicast, and Center V2) for instant playback. This feature is discussed in Chapter 8.

This chapter discusses ViewLog, Quick Search, and Remote Playback System in details.

Playing Back on ViewLog

The ViewLog would play back recorded video files without affecting recording. There are two ways to launch ViewLog:

- Start Video Log from the GV-folder (Windows Start menu/Programs)
- In the Main System, click the **ViewLog** button and then select **Video/Audio Log**. Or press **[F10]** on the keyboard.

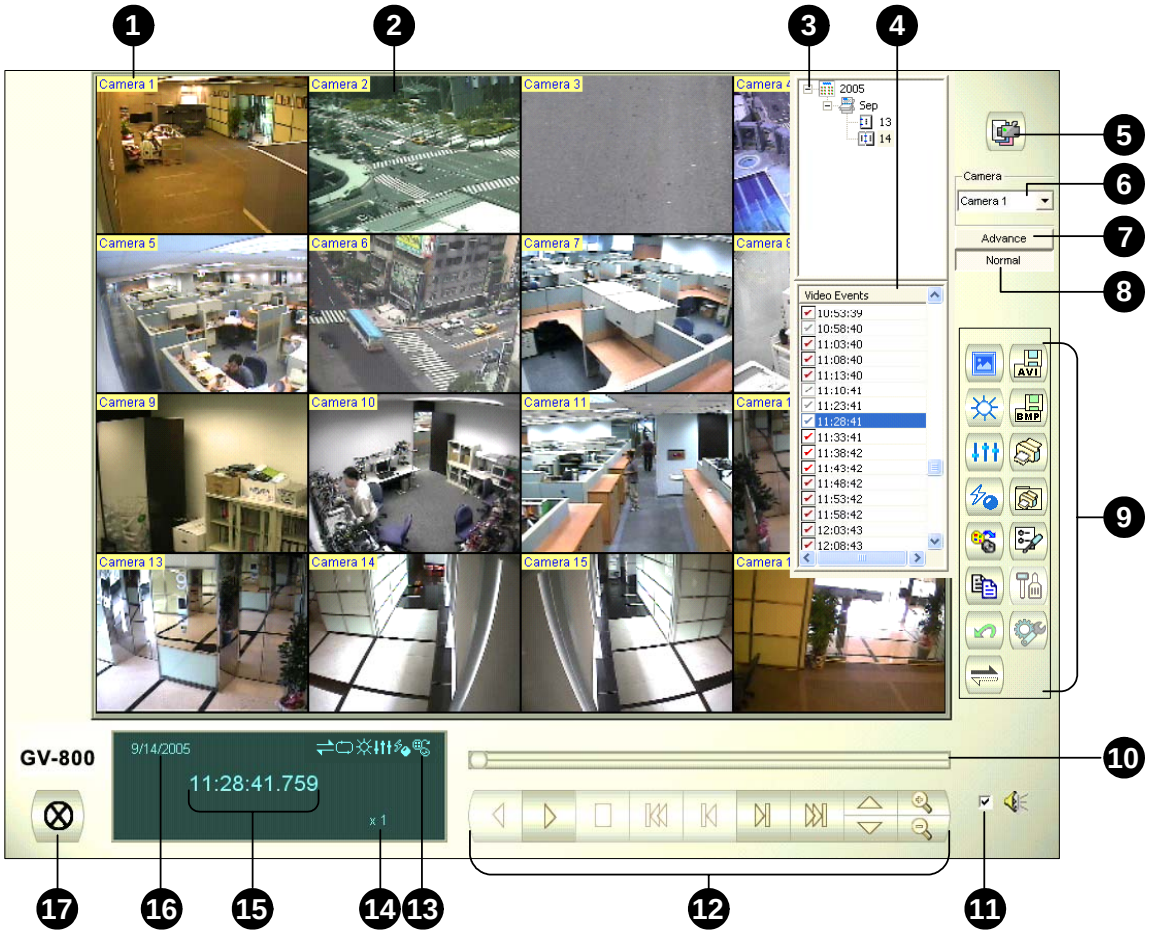


Figure 4-1 *The ViewLog Window*

By default when you open ViewLog, it will play the last event of camera number 1. Without further settings you could already play back the event by clicking the **Play** button (No. 12, Figure 4-1) on Playback Panel. Click the **View Mode** button (No. 5, Figure 4-1) to switch the current view mode to a multi-channel view. Use controls on Playback Panel to view the event in the way you want. Move the slider in Playback Meter (No. 10, Figure 4-1) forward and backward to navigate video frames.

To play back multiple events, keep pressing **[CTRL]** on the keyboard and highlight the desired events on the Video Event List (No. 4, Figure 4-1). Then click the **Play** button to play these events. To select events from different dates, click the date from the Date Tree (No. 3, Figure 4-1). Events of that date will be listed in the Video Event List.

The controls in the ViewLog window:

No	Name	Description
1	Camera Name	Indicates the given camera name.
2	Camera View	Displays the playback video.
3	Date Tree	Displays date folders.
4	Video Event List	Displays video events within a certain date folder.
5	View Mode	Sets screen divisions: Single, Thumbnail, Quad or Multi View.
6	Camera Select	Sets a desired camera for display.
7	Advance	Accesses the basic or advanced search; see *Searching a Video Event*, later in this chapter. And reloads video event list.
8	Event List	Displays the date tree and video event list.
9	Function Panel	Provides various settings for ViewLog.
10	Scroll Bar	Scrolls forward or backward of the playback video.
11	Voice	Enables audio playback.
12	Playback Panel	Contains typical playback control buttons.
13	Function Icons	A highlighted icon indicates an enabled function. From left to right are the A to B Mode, auto playing of next events, the contrast and brightness function, the light enhancement and equalization function, the sharpness and smoothness function, the grayscale function, and reconnection to Remote ViewLog.
14	Playback Speed	Indicates the playback speed. x1 represents normal playback speed.
15	Time Display	Indicates the time of the playback video.
16	Date Display	Indicates the date of the playback video.
17	Exit	Closes or minimizes the ViewLog window.

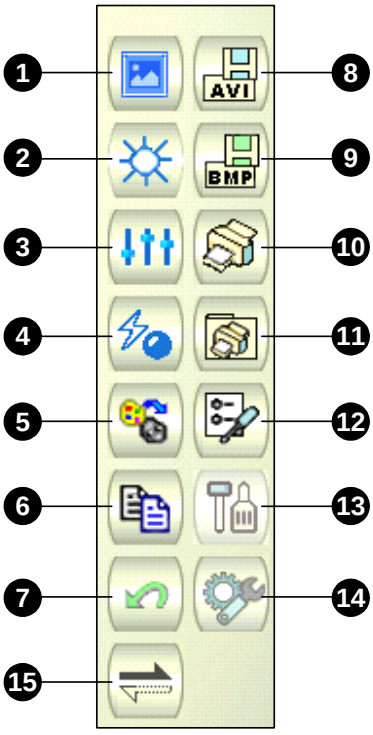


Figure 4-2 *Function Panel*

The controls in the Function Panel:

No	Name	Description
1	Sample	Gives the examples of “Before” and “After” effects of contrast, brightness, light enhancement, equalization, sharpness, smoothness and Grayscale.
2	Contrast/Brightness	Modifies color contrast and brightness of the video image.
3	Light Enhancement/ Equalization	Modifies light enhancement and equalization of the video image. To remove the applied effect, click the **Undo** button.
4	Sharpen/Smooth	Modifies smoothness and sharpness of the video image. To remove the applied effect, click the Undo button.
5	Grayscale	Switches between the color and black/white image.
6	Copy	Copies the video image.
7	Undo	Undoes the applied effects on the video image.
8	Save AVI File	Saves a video file as avi or exe format; see *Exporting Video*, later in this chapter.
9	Save As Image	Exports image files in bmp, jpg, gif, png, or tif format.
10	Print	Prints out the image.
11	Print Setup	Specifies various settings for printing.
12	Page Setup	Adjusts the page layout.
13	Setting	Sets up advanced functions for ViewLog; see *Advanced Setup,* later in this chapter.
14	Tools	Brings up these options: Object Search, Advanced Log Browser, Backup, Delete, Connect to Remote ViewLog Service, Address Book, Full Screen and Fast Key. All of them are explained later in this chapter.
15	A to B Mode	Plays repeatedly the set frames A to B.

Playback Screen Layout

Click the **View Mode** button to select the following screen layouts:

- **Single View:** Displays one playback channel only.
- **Thumbnail View:** Reviews images frame by frame in thumbnails. Only one camera at a time can be selected for this function.
- **Quad View:** Plays back in a quad layout.
- **Multi View:** Plays back all available cameras.

Click the **View Mode** button (No. 5, Figure 4-1) any time when you want to change the current view mode. The option of Thumbnail View is disabled while a video file is playing back. Wait until the video ends or click the **Pause** button to make the option available.

In a thumbnail view, a video file is divided into a set of frames. The frames are displayed in 25 playback windows, shown as follows.

The key frame is in the center, with 12 video frames occurred before and after the key frame. This helps to locate required frames you may otherwise miss by other viewing methods.

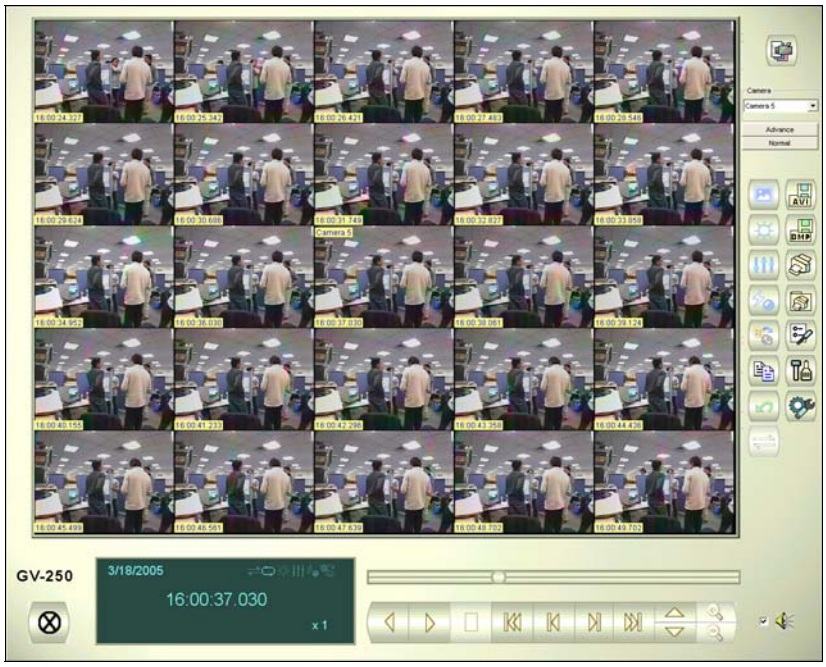


Figure 4-3

Playback Control Buttons

Video files may be played back with or without audio. To play back with audio, check **Voice**, as shown below. (Please note not all GV cards support the audio function.)

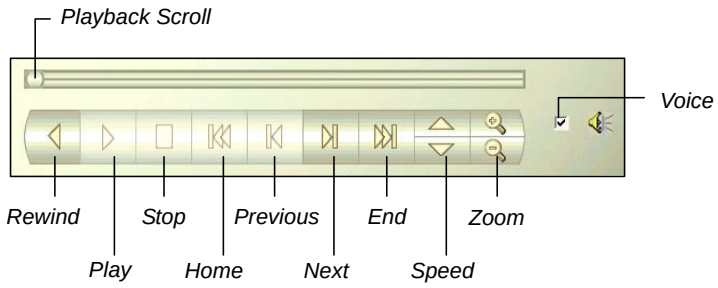


Figure 4-4

A to B Playback Mode

When playing video events, you can set a starting and an ending frame for auto-playing:

1. To set the starting frame A, click the **A to B Mode** button (No. 15, Figure 4-2). The message *A to B Mode (Set A)* appears on the screen.
2. To set the ending frame B, click the **A to B Mode** button. The message *A to B Mode (Set B)* appears on the screen.

ViewLog will start playing the set frames A to B repeatedly. To stop the playing, click the **A to B Mode** button; the message *A to B Mode (Cancelled)* will appear.

Searching a Video Event

ViewLog offers two search methods: the Basic and the Advanced, allowing you to locate a video event within a certain date, time or camera.

Basic Search

1. Click the **Advance** button (No. 7, Figure 4-1) and select **Basic Search** to display the following dialog box. Alternatively, press **[CTRL]** + **[F8]** on the keyboard to call it up.

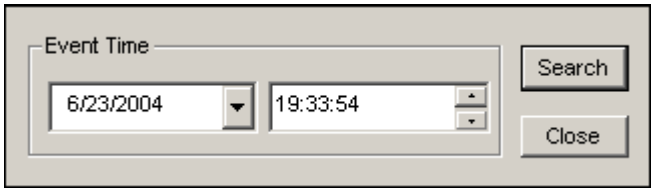


Figure 4-5

2. Specify a desired date and time.
3. Click the **Search** button for the search. If the specified time can't be found, a prompt will appear for you to select a next or previous video event available.

Advanced Search

1. Click the **Advance** button (No. 7, Figure 4-1) and select **Advanced Search** to call up the following dialog box. Alternatively, press **[F8]** on the keyboard to call it up.

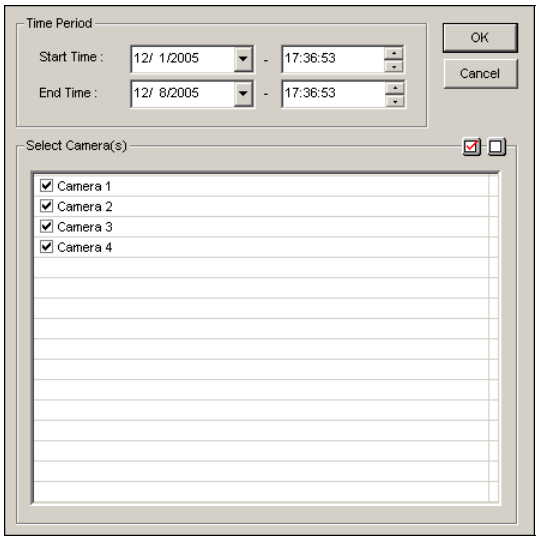


Figure 4-6

2. Specify the desired date, time period, and cameras for search.
3. Click **OK** to start searching.
4. In the Video Event list, the events matching the search criteria will be highlighted in gray color. Click the **Play** button to play back the highlighted events.

Exporting Video

You can export a certain time period within a video event and play it back at the place where ViewLog is not available. The maximum length of the exported file is 1 hour.

1. Locate a desired file from the date tree and video event list (No. 3 & 4, Figure 4-1).
2. Select the screen division from the View Mode button (No. 5, Figure 4-1).
3. Click the **Save AVI File** button (No. 8, Figure 4-2). This window appears.
   Alternatively, press **[S]** on the keyboard to call it up.

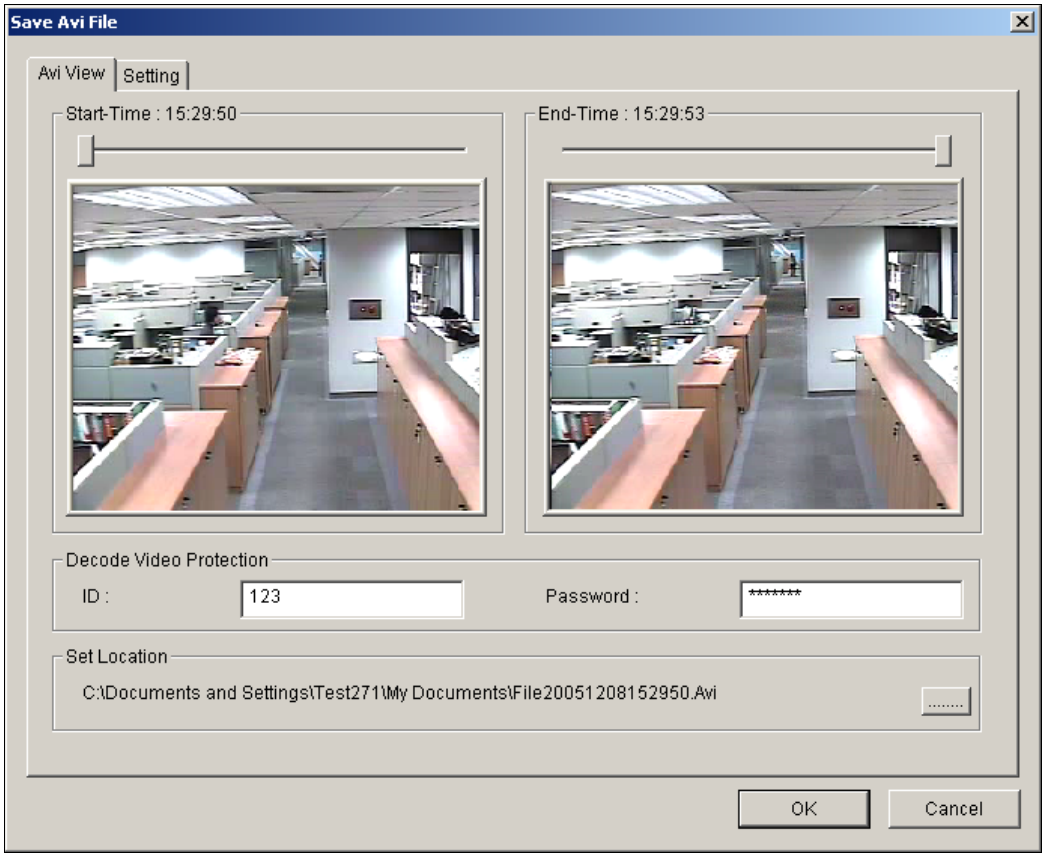


Figure 4-7 *Save AVI File*

4. Drag the timelines to define a starting and ending time of the file.
5. If the video event has the Privacy Mask settings, and you want to retrieve the recoverable block-out area(s) in the exported file, type a valid ID and password in the Decode Video Protection field.
   If you want to remain the recoverable block-out area(s) in the exported file, leave the field blank.
   For details on Privacy Mask, see *Privacy Mask Protection* in Chapter 1.
6. Click the **[……]** button in the Set Location section to assign a saving path.
7. Click the **Setting** tab to configure the exported video. See *AVI File Settings* below.
8. Click **OK** to export and save the file.

AVI File Settings

To configure the format of exported video, follow these steps:

1. Click the **Setting** tab on the Save AVI File window. This window appears.
   Note that when you save the AVI file in single view mode, the window looks slightly different.

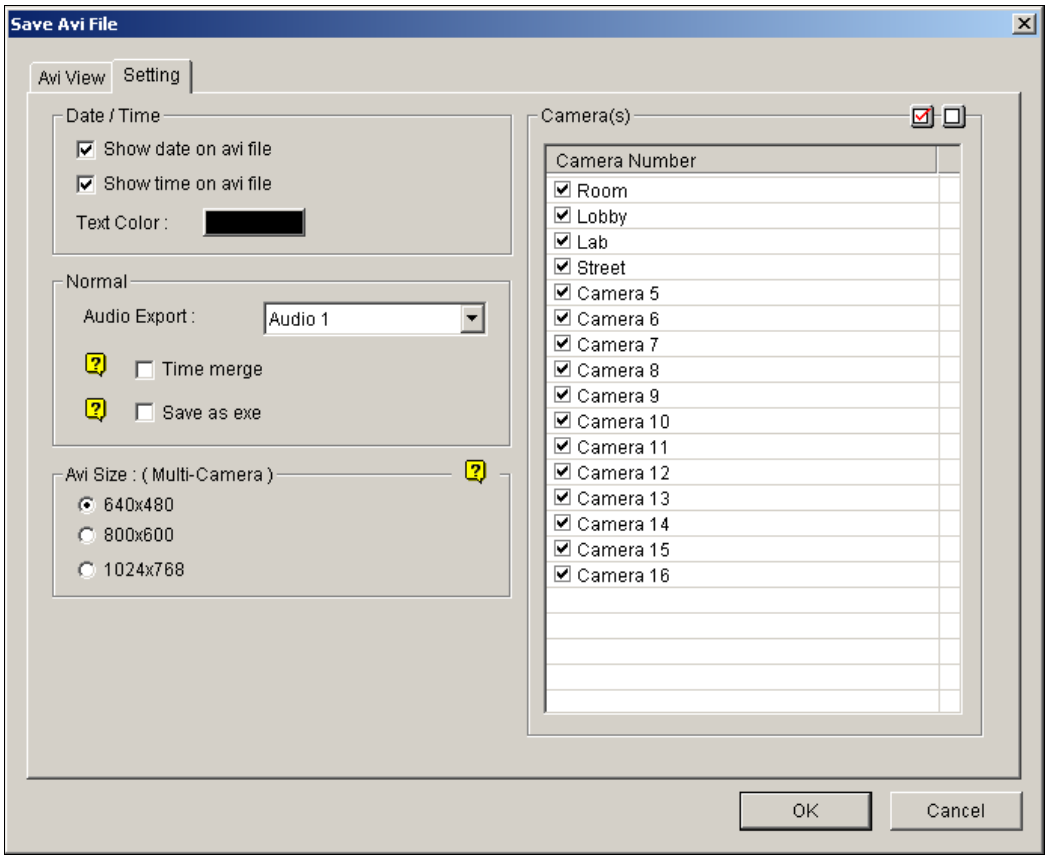


Figure 4-8

[Date/Time] Select whether to include date and/or time stamps. And select the stamp color.

[Normal]

- **Audio Export:** This option is only available when your audio channels are set up.
- **Time Merge:** Click to save a full-length video with recorded and non-recorded periods. The non-recorded period will display a blank blue screen. This option is designed to accurately reflect your recording status.
- **Save as EXE:** Click to save files as EXE format. Enable this feature if you want to play back video at the computer without installing GV-System. This format allows you to auto-play the files with any third-party player.

[AVI Size] Select the screen size of the saved file.

[Camera(s)] Select which camera file for exporting.

2. Click **OK** to apply above settings.

Saving Images

You can save the current camera view as an image file.

1. Click the **Save As Image** button (No. 9, Figure 4-2). This dialog box appears.

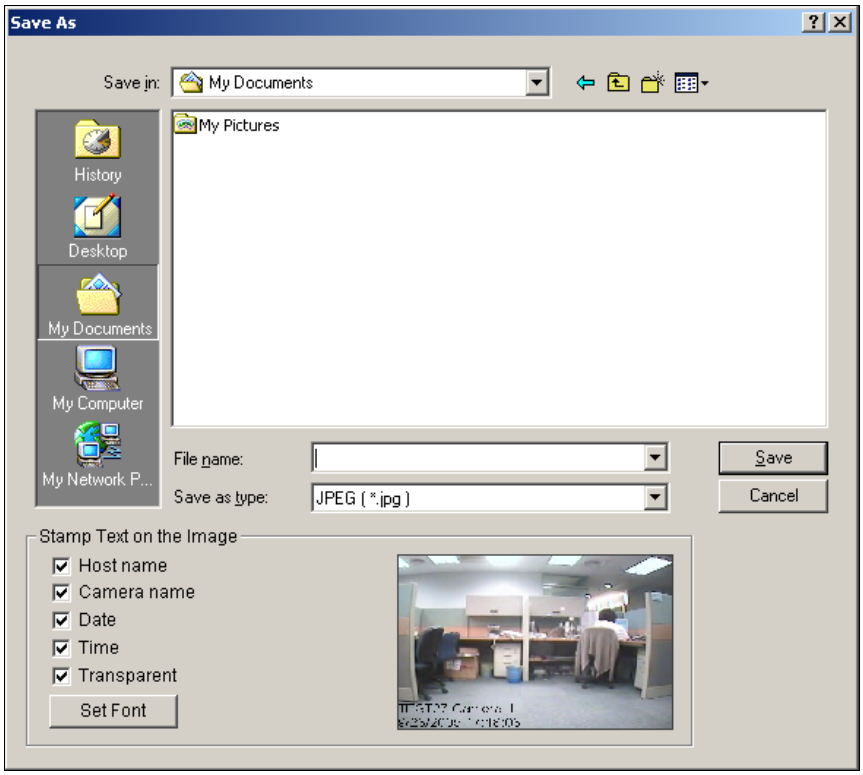


Figure 4-9

[Stamp Text on the Image]

Select whether to include host name, camera name, date and/or time stamp on the image.

Selecting **Transparent** will create the stamp on the transparent background.

Click the **Set Font** tab to set the font for the stamp.

[The image] Click on the image at the bottom to preview the stamp text. Click on the image again to close the preview window.

2. Name the file, select a file format, and then assign the location to save the image file.

Printing Images

You can print images in three layout styles: single view, quad view or multi view.

1. Click the **View Mode** button (No. 5, Figure 4-1) to decide the screen layout.
   Note that Thumbnail View is not available for print.
2. Select an event in the Video Events list (No. 4, Figure 4-1), and then click the **Print** button. This dialog box appears.

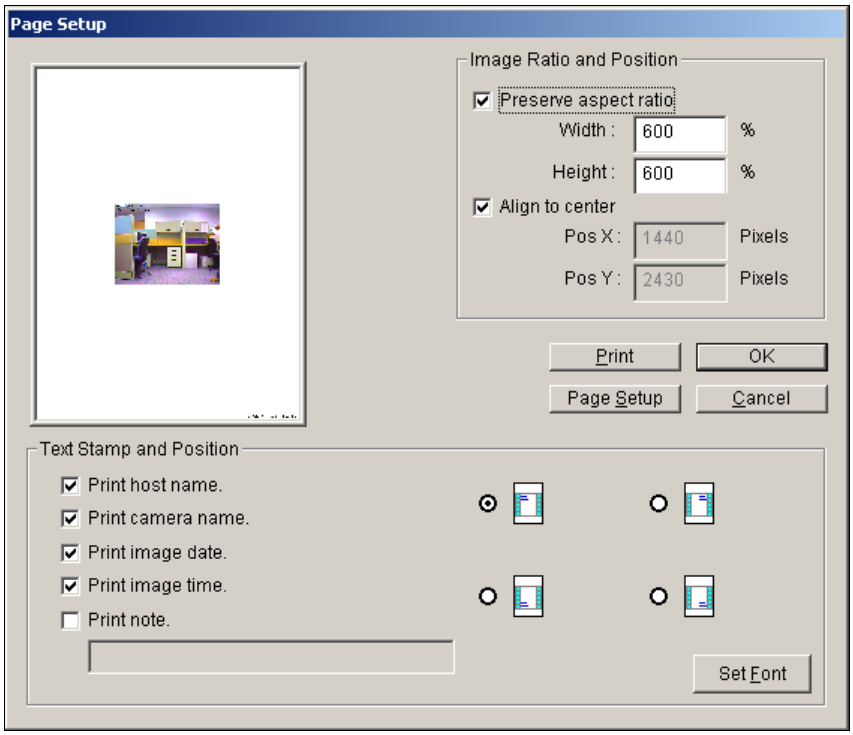


Figure 4-10

[Image Ratio and Position] Changes the size of the image and its position on the page. This option is only available in Single View mode.

- **Preserve aspect ratio:** Click to maintain the aspect ratio when resizing an image.
- **Align to center:** Click to change the position of the image on the page.

[Text Stamp and Position]

Select whether to include the host name, camera name, date and/or time stamp on the printed image.

Select **Print note** to include a note below the image. Under the Print note field, type the text of less than 64 characters.

- **Stamp position icons:** Sets the position where the stamp is printed.
- **Set Font tab:** Click to select the font type for the stamp.

3. Click **OK** to save the settings or **Print** to print out the page.

Object Search

This feature allows you to perform two functions: 1. Detect motion, missing objects or unattended objects within a certain region of a recorded file. 2. Perform the counting function within certain regions in a recorded file. The following gives an example of motion detection. For details on missing objects, unattended objects and counting, refer to *Configuring Object Counting* and *Detecting Unattended and Missing Objects* in Chapter 1.

1. Select a desired video file from the Video Event list for the search. Or select multiple files by clicking on each file while keeping pressing **[CTRL]** on the keyboard.
2. Click the **Tools** button (No.14, Figure 4-2) on the function panel, and then select **Object Search** to display the following window.

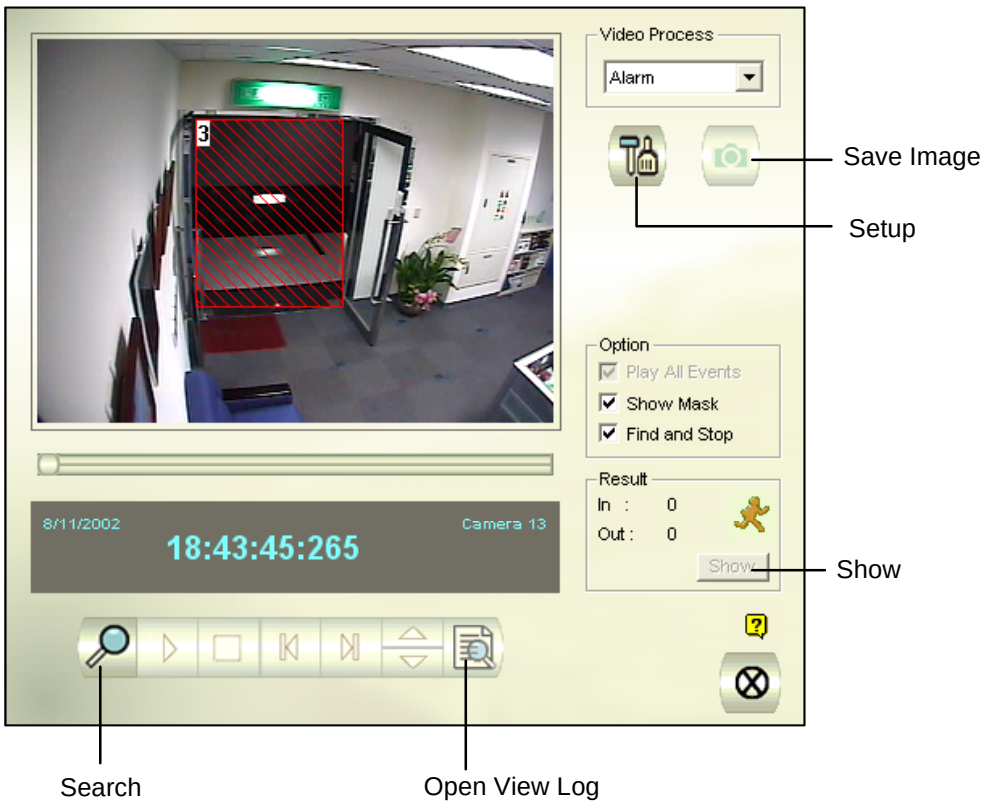


Figure 4-11 *Object Search*

3. In the Video Process drop-down list, select **Alarm**.
4. Click the **Setup** button for further settings. The following window will appear.

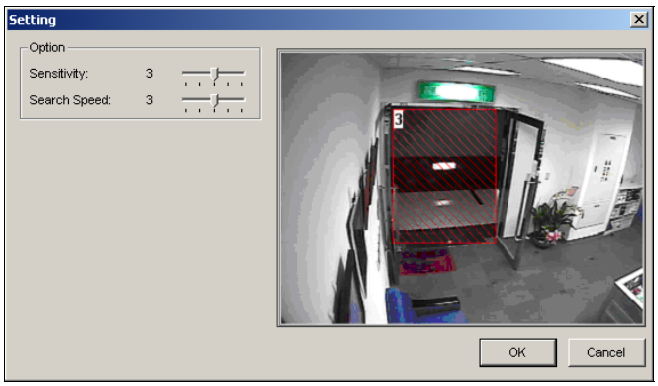


Figure 4-12

5 Use the mouse to outline a region for motion detection. You will be prompted to enter **Alarm Region**.

6. Keep detection Sensitivity and Search Speed as defaults or adjust them if needed.

7. Click **OK** to finish the settings and close the window.

8. In the Option section, you have several options:

- **Play All Events:** Plays back the video segments found as a continuous series of images.
- **Show Mask:** Shows masks on the detection regions.
- **Find and Stop:** (recommended) Pauses the search process when motion is detected.

9. In the control panel, click the **Search** button for the search.

10. When any video segment matches the search criteria of motion detection, the **Show** button will be available. Click **Show** to display the Event List window.

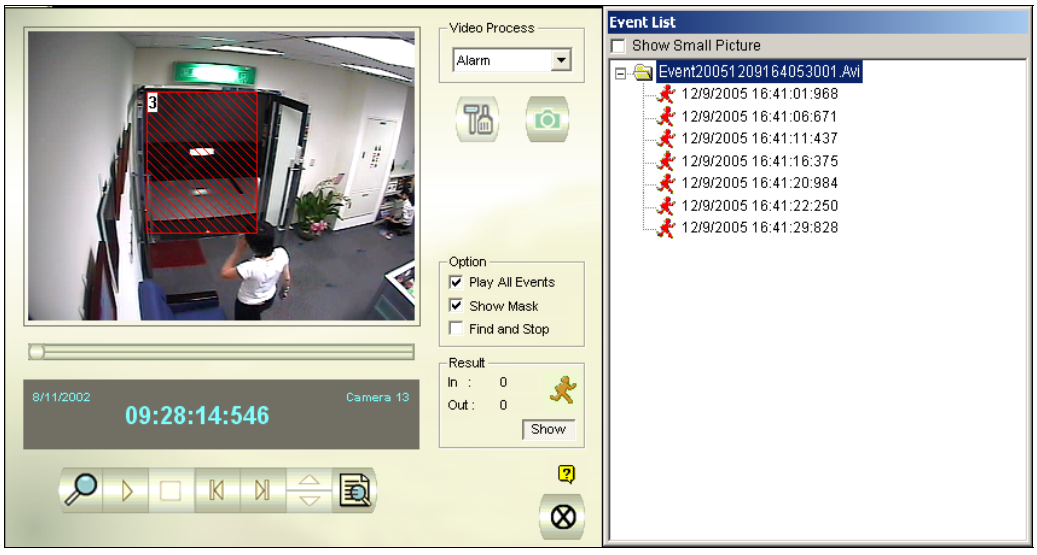


Figure 4-13

11. Expand the event folders to see the video segments inside. Or, enable **Show Small Pictures** at the upper of window to access the thumbnail view.

12. Select one video segment, and then click the **Play** button in the Object Search window to play it back. Or, click the **Open ViewLog** button to play it with ViewLog.

Searching and Playing Back Motion, Alarm, and POS Event

1. Click the **Tools** button, select **Advanced Log Browser** from the menu and the following dialog box will appear.

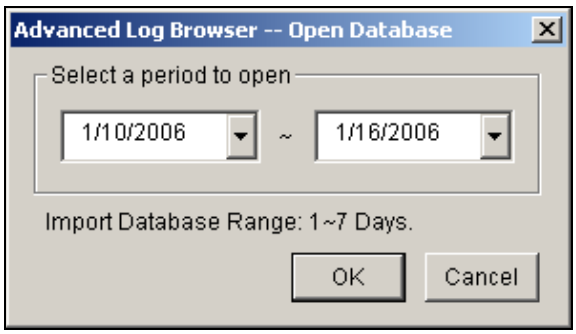


Figure 4-14

2. Specify a time range, click the **OK** button, and all events within the specified range will be displayed on this Advanced Log Browser window.

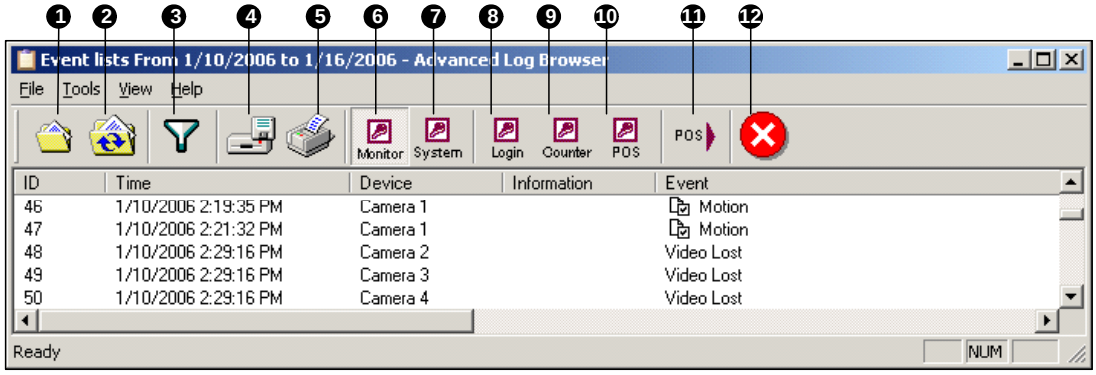


Figure 4-15 *Advanced Log Browser*

The buttons on the Advanced Log Browser:

No.	Name	Description
1	Open	Opens an event log.
2	Reload	Selects **Reload All Table** or **Reload Current Table** to refresh loaded data.
3	Filter	Defines the search criteria.
4	Backup	Selects **All Tables** to back up all log data, or selects **Current Table** to back up the current log table you are at.
5	Print	Prints the current log table.
6	Monitor Table	Displays the monitor log.
7	System Table	Displays the system log.
8	Login Table	Displays user's login/logout log.
9	Counter Table	Displays the counter log.
10	POS Table	Displays the POS log.

11	POS List	Accesses one POS channel for log data.
12	Exit	Exits the browser.

In the Advanced Log Browser Window, double-clicking the Monitor Log list or the POS Log list will allow you to view related video in Quick Search Screen as shown in Figure 4-16.

Quick Search is a very useful tool for searching and playing back video files that were based on motion detection, alarm, or POS events. The following figure and table give you an overview on Quick Search's features and functional buttons.

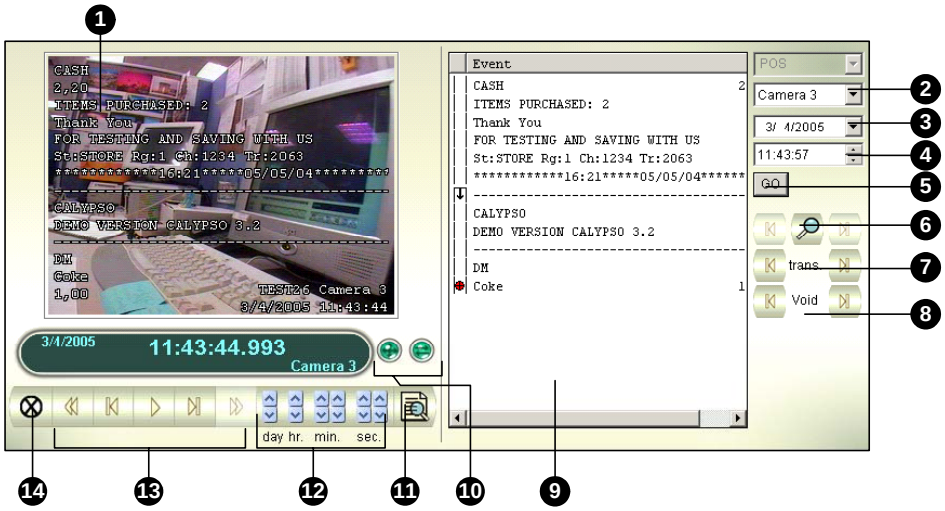


Figure 4-16 *Quick Search*

The controls on the Quick Search window:

No.	Name	Description
1	Monitoring Window	Displays video associated to the event
2	Camera Select	Use the drop-down list to select camera
3	Day Select	Use the drop-down list to select date
4	Time Select	Use the drop-down list to select time
5	Go Button	Click to search files that matches to the parameters set above.
6	Event Query	Click to specify event query
7	Transaction	Use the arrow buttons to select previous or next transaction event.
8	Void	Use the arrow buttons to select previous or next void event.
9	Transaction Window	Displays POS transaction
10	Mode Switch	Click these buttons to enable or disable Transaction Window and to switch between 640x480 or 320x240 display.
11	ViewLog	Click to open ViewLog application.
12	Time Period	Use these buttons to search event within the specified time.
13	Playback Panel	Includes Play, Pause, Previous 10 frames, Home, Next 10 frames, End buttons.
14	Exit	Click to close Quick Search screen

Click the **Event Query** button (No. 6, No. 3-16) on the Quick Search window, and the following dialog

box will appear. Use this function to find POS events by a specific item, transaction, or date.

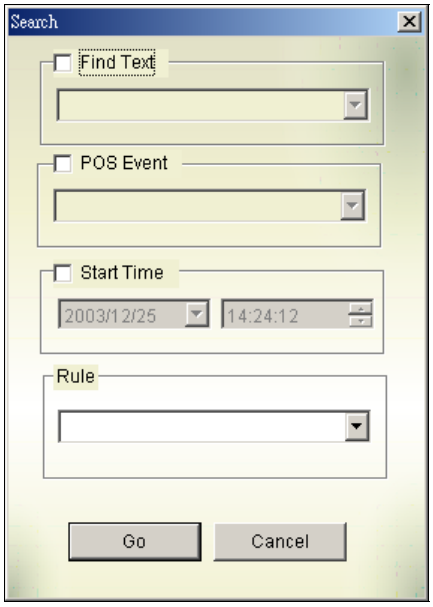


Figure 4-17

[Find Text] Enable this option to find video events that match to the key word.

[POS Event] Enable this option to find video events that match to the specified transaction type.

[Start Time] Enable this function and use the drop-down list to specify date and time

[Rule] Specify to search forward or backward from the set date.

Advanced Setup

The **Setting** button on the Function Panel allows you to configure (1) Quad View, (2) Play Setting, (3) Display and (4) Cache. Click this button to open the System Configuration dialog box.

[Quad View]

Select four desired cameras to display in Quad View mode.

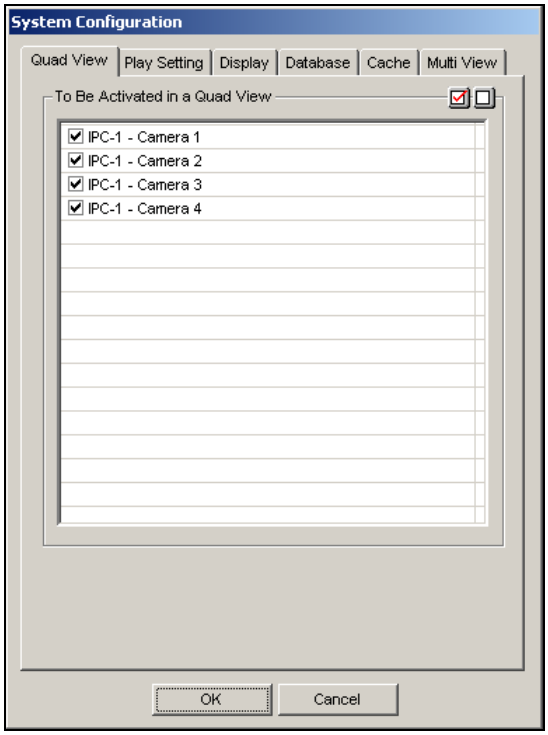


Figure 4-18

[Play Setting]

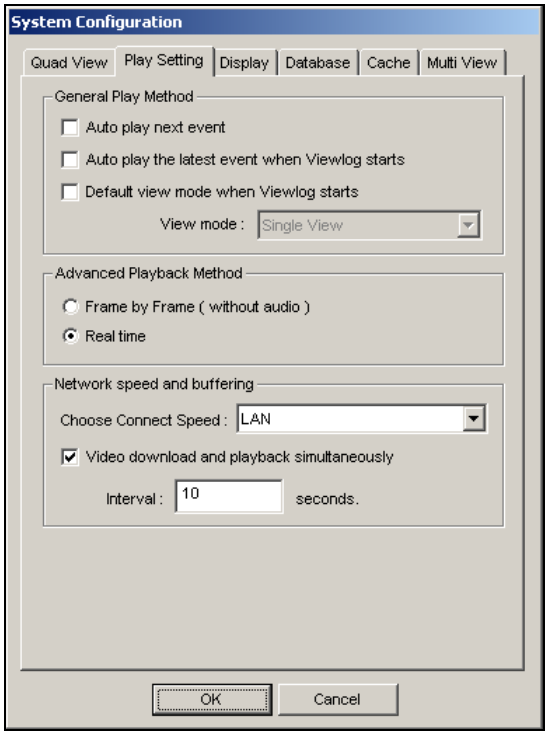


Figure 4-19

[General Play Method]

- **Auto play next event:** The next events can be put in sequence for auto playing.
- **Auto Play the latest event when Viewlog starts:** The latest event starts playing when ViewLog starts.
- **Default view mode when viewlog starts:** Select the desired view mode at startup.

[Advance Play Method]

- **Frame by Frame (without audio):** Plays back video frame by frame. This method delays playback depending on bandwidth and computer performance, but all video frames are fully played back.
- **Real time:** Plays back video on real time. This method saves waiting time for rendering, but drop frames to give the appearance of real-time playback.

[Network Speed and Buffering] This feature provides network-buffering options to meet your bandwidth needs. This section is only available when the Connect to Remote ViewLog Service feature is enabled. For Remote ViewLog Service, see *Playing Back over Internet Using Control Center Server,* later in this chapter.

- **Choose Connect Speed:** Select your connection speed for LAN, Broadband or Narrowband. The selection will bring up default settings in the Advanced Play Method and Network Buffering options.
- **Video download and playback simultaneously:** This method is recommended for broadband and busy network. It partially downloads and stores a file in a buffer before it begins to play. Specify the interval between downloaded files.

[Display]

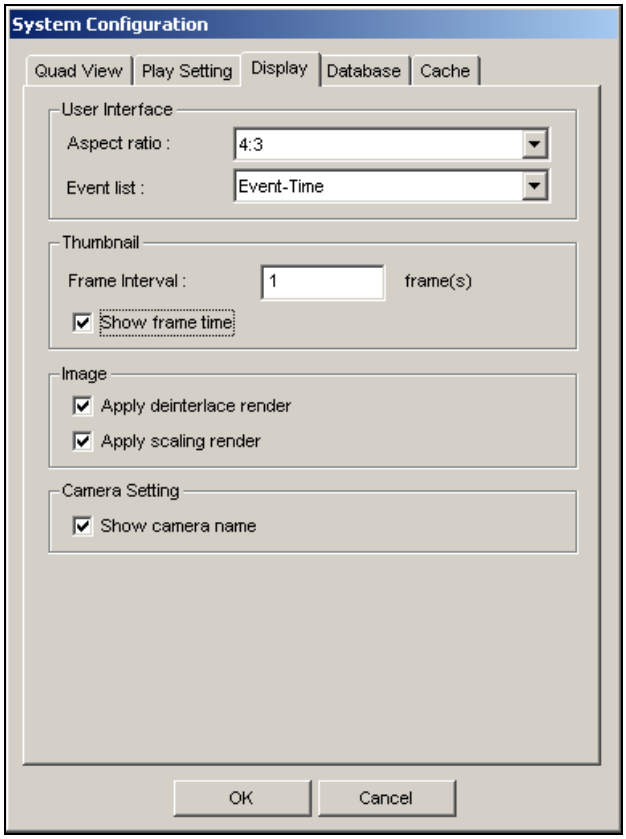


Figure 4-20

[User Interface]

- **Aspect Ratio:** Select the ratio between the width of the image and the height of the image.
- **Event List:** Click the drop-down list to select the display layout of Video Event List. You can select to display Event Time only, Event Time together with Total Frame, Event Time together with Total Time, or Event Time together with File Size.

[Thumbnail]

- **Frame Interval:** Specify the number of frames between each video thumbnail.
- **Show Frame Time:** Displays time stamp on each thumbnail.

[Image]

- **Apply De-interlace Render:** Enable the De-interlace function, and then restart ViewLog to apply it.

Note: This function requires DirectX 9.0C. The De-interlace only works in single view with the resolution of 640 x 480 and 720 x 480.

- **Apply Scaling Render:** Select to smoothen mosaic squares when enlarging a playback video. Restart ViewLog to apply it for the first time.

Note: This function requires DirectX 9 and VGA card with the video scaling support. And the scaling only works in single view.

[Camera Setting] Display the camera number and name on the screen.

[Database]

Specify the duration of event files to be loaded at ViewLog startup.

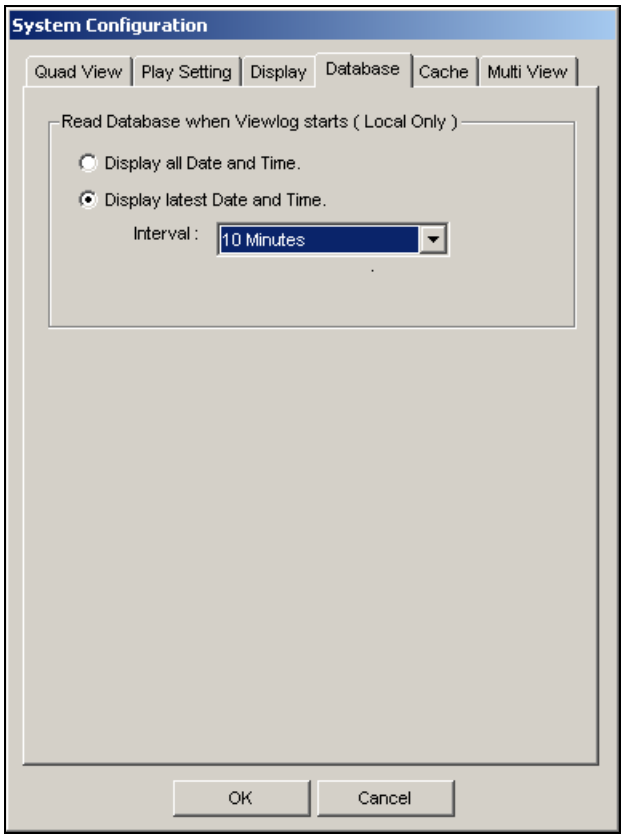


Figure 4-21

- **Display all Date and Time:** Load all recorded event files.
- **Display latest Date and Time:** Check this item and select time length of the event files to be loaded.

Note: If you check the **Display latest Date and Time** option, the Event List will not be refreshed as the latest event is recorded. To refresh the List, click the **Advance** button and select **Reload database**.

[Cache]

A cache is a memory location that is used to store data temporarily, when you are using the function of Save AVI, Export DVD or Network Buffering. If the default path does not have sufficient space for this temporary storage, assign another path by clicking the **[…]** button.

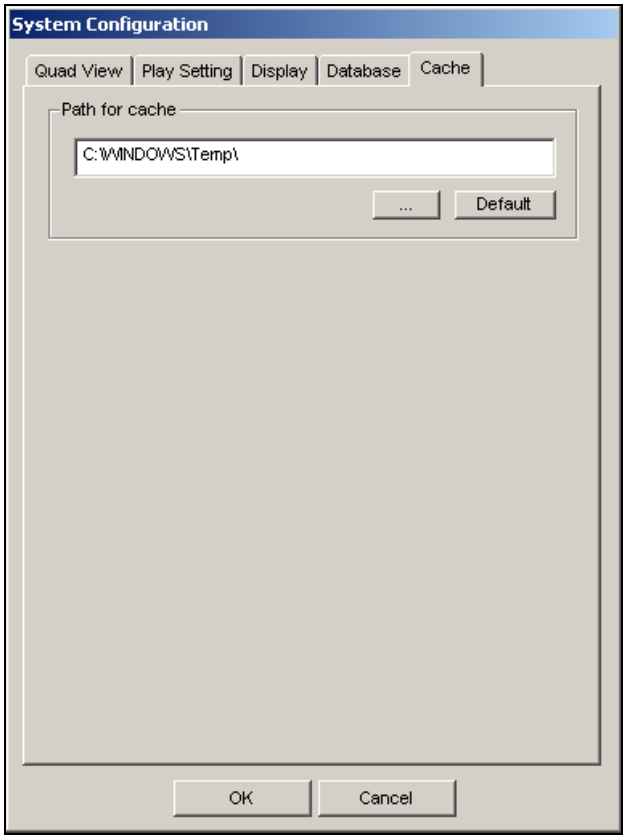


Figure 4-22

Recycling Option for Video Files

You can choose whether to recycle your video files. To apply this function, follow the steps below.

1. Select a desired video event from Video Event List, and then right-click it to call up a menu as shown below.

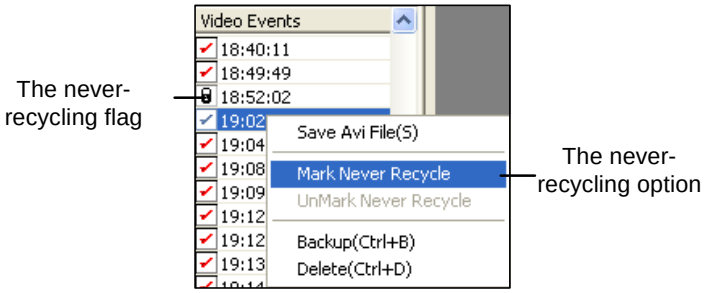


Figure 4-23

2. Select the **Mark Never Recycle** option. A never-recycling flag will appear next to the video event.
3. To disable the never-recycling function, right-click the video event again and select **Unmark Never Recycle**.

Unmarking All Never-Recycling Flags

The above step 3 illustrates how to unmark never-recycling flag one by one. When you like to unmark all the never-recycling flags in certain cameras, follow the steps below.

1. Shut down ViewLog and Main System if they are running.
2. Go to the **Windows Start** menu, select **Programs**, point to the GV folder, and then click **Repair Database Utility**. A valid ID and a password are required.
3. When the Select Camera for Repair Database dialog box appears, select the cameras of video files that you want to unmark their never-recycling flags
4. Click **OK** to open the Repair Database window. See Figure 5-14 in Chapter 5.
5. Click the **Use Default Path** button to unmark all the never-recycling flags.

Reserving Never-Recycling Flags

If you like to reserve all the never-recycling flags you marked on video events even after repairing the database, check **Reserve Never-recycle Flag** on the Repair Database window before making repairs. See Figure 5-14 in Chapter 5.

Playing Back over Local Area Network (LAN)

Using LAN ViewLog, it is possible to play back video files across the Local Area Network (LAN). This application provides access to file locations and allows playback in any local computer. Same tasks would be accomplished by using Windows My Network Places but in a much more complicated process.

Before you start, make sure both your system folder and to-be-view video files are made available to network users, done through the proper setup in **Windows Sharing And Security**.

After the folders and files are made available, you must download **LAN ViewLog** and install **GV codec** to your local computer first:

1. At the local computer, go to **Windows My Network Places**. Find the server where the GV-System is located.
2. To download LAN ViewLog, locate **LANViewLogCtrl.exe** from the system folder (Figure 4-24-1), and copy and paste this program to your local computer.
3. To install GV codec, locate the Install Codec folder in the system folder, and run **InstallCodec.exe**.

To view video files:

1. At the local computer, execute **LANViewLogCtrl.exe** to bring up the LAN ViewLog Controller window. See Figure 4-24-2.

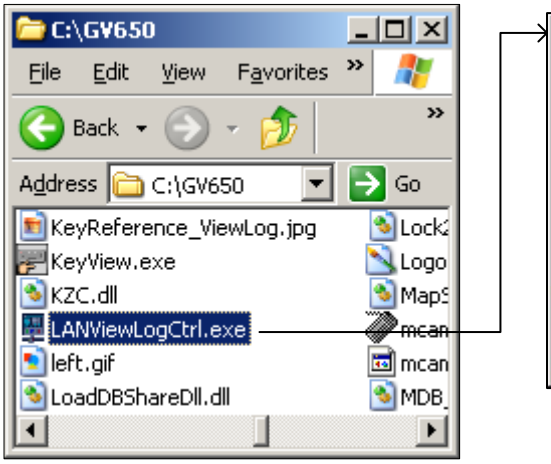


Figure 4-24-1

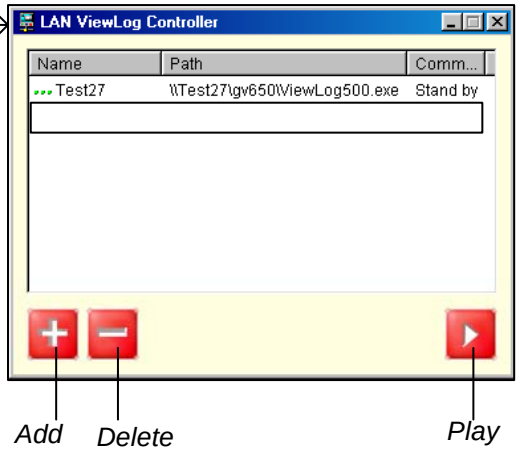


Figure 4-24-2

2. Click the **Add** button to bring up the Add ViewLog dialog box.

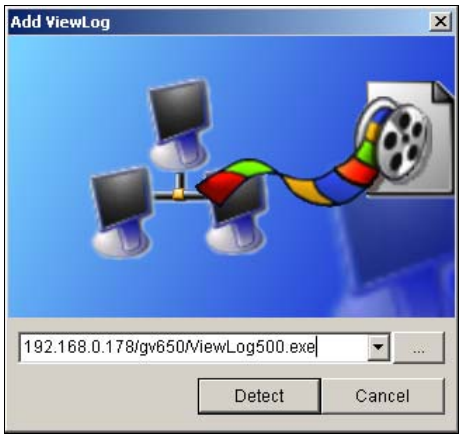


Figure 4-25

3. Click **[…]** the Browse button, and locate **ViewLog500.exe** in the server computer.

4. Click the **Detect** button to load video files from the server computer.
   If you see a Red Cross sign instead of green checks (Figure 4-26), go back to your Windows Sharing And Security in the server PC and check if you've made these folders shared for intended PCs.
5. Click the **Add** button. A path to the server is now established.

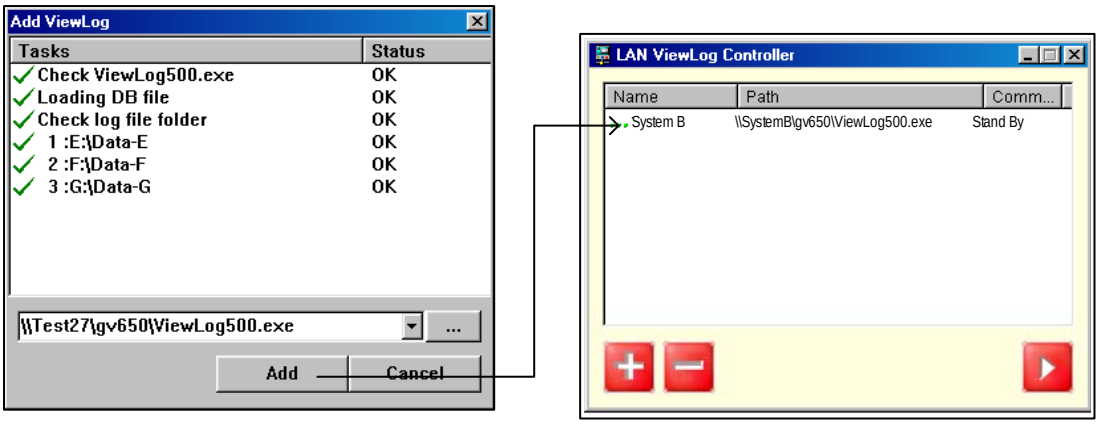


Figure 4-26

6. Highlight the path, and click the **Play** button to open ViewLog that is loaded with video files. More paths may be added for fast access through the application.

Playing Back over Internet Using Control Center Server

Through a network connection, the Control Center Server enables access to a remote ViewLog for playback. It features:

- All functions provided by ViewLog are available, such as Backup, Save as AVI, Object Search and so on
- Capability of disabling certain camera connections under heavy network load
- Resuming file transfers for backup

Accessing the Remote ViewLog

Before you start, make sure the Control Center Server feature is enabled in the remote GV-System. On the main screen, click the **Network** button, point to **Control Center Server** and select **Remote ViewLog Service** to start the connection. At the local site:

1. On the function panel, click the **Tools** button (No. 14, Figure 4-2), and select **Connect to Remote ViewLog Service**. This dialog box appears.

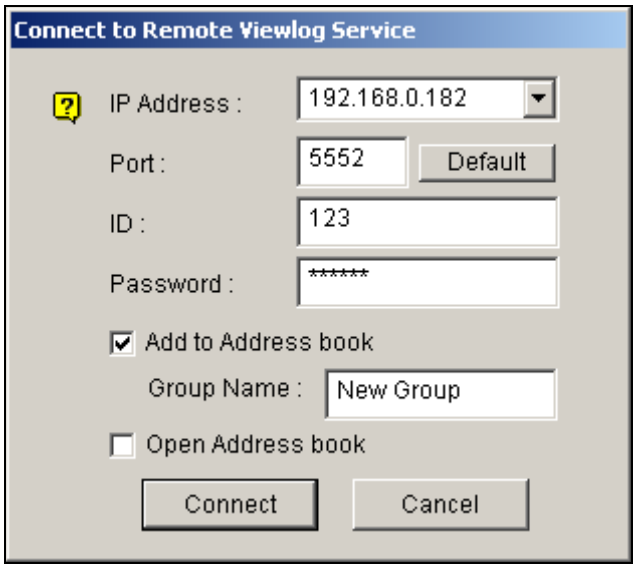


Figure 4-27

2. Enter the IP Address, ID and Password of the remote GV-System.
3. Click the **Connect** button.

When the connection is established, you will see the remote ViewLog appears on your screen. Then you can use all ViewLog features for playback.

Viewing Connection Status

You can view connection status of each camera, and disable certain camera connections when the Internet is overloaded.

On the function panel, click the **Setting** button (No. 13, Figure 4-2), and then click the **Mulit View** tab. This dialog box appears.

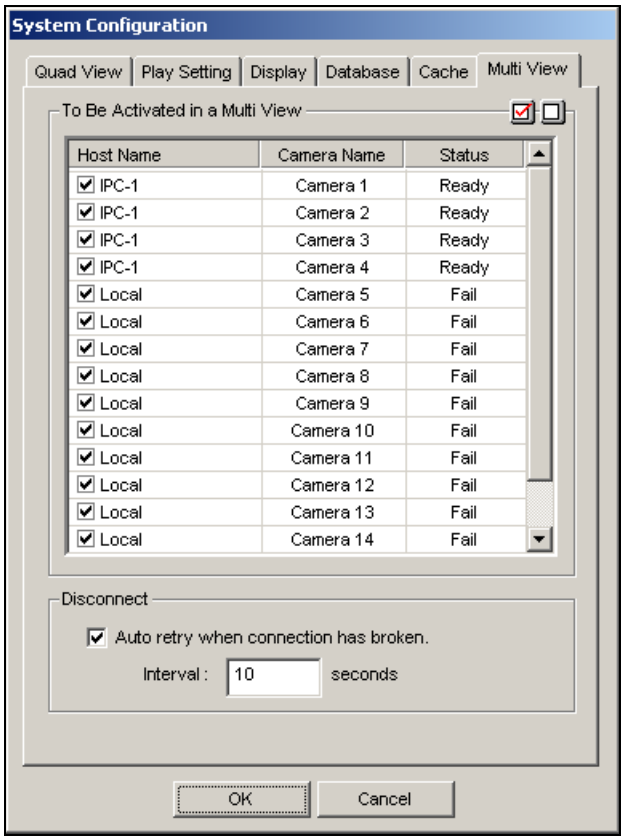


Figure 4-28

[Host Name column] Indicates the host name of a remote camera. Uncheck to disconnect from one camera.

[Status column] The message **Ready** indicates an established connection while **Fail** means a failed connection.

[Auto retry when connection has broken] When the connection is broken for a specified time, the system will automatically re-connect to the remote ViewLog.

Resuming Backup

Backing up files from a remote ViewLog is possible via the Control Center Server. When the file transfer is interrupted by a network error, you can even resume backup.

1. When the backup is interrupted, this message will appear: *There are x file(s) couldn't be backup. Do you want to keep a log file and backup them later?*
2. Click **Yes.** You will be prompted to save the partial backup file as *lv format.
3. To resume backup, click the **Resume** button in the Backup dialog box, and then locate the partial backup file to continue.

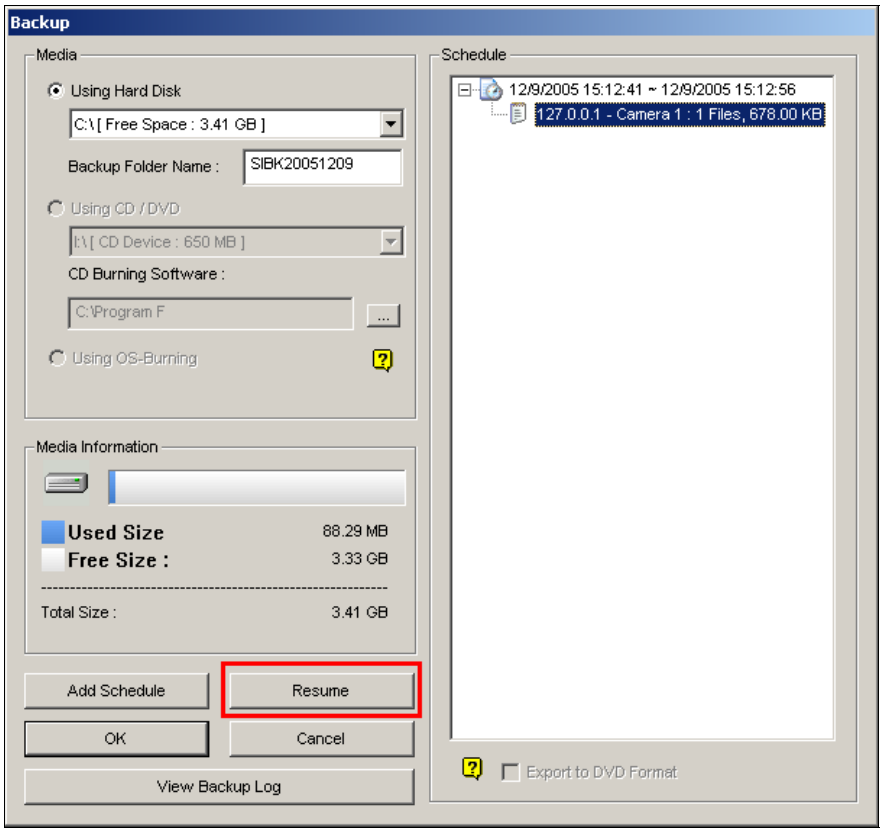


Figure 4-29

Playing Back over Internet Using Remote Playback

Remote Playback Client (RPB Client) allows client PCs to download history video files from server PCs through Remote Playback Server (RPB Server). Before getting started, make sure the following requirements are met:

OS	Windows 2000, XP, Server 2003
CPU	Pentium 500 (minimum)
Memory	128MB RAM
Hard Disk	20GB (minimum)
VGA	NVIDIA GeForce II 32MB, 800x600 screen resolution (minimum)
Network	TCP/IP

Working with Remote Playback Server at the Server PC

To establish a connection, first activate RPB Server at one server PC. RPB Server comes with the installation of Main System. Follow these steps to activate it.

1. Go to **Windows Start**, select **Programs**, point to the GV folder, and then select **Remote Playback Server**. This RPB window appears.

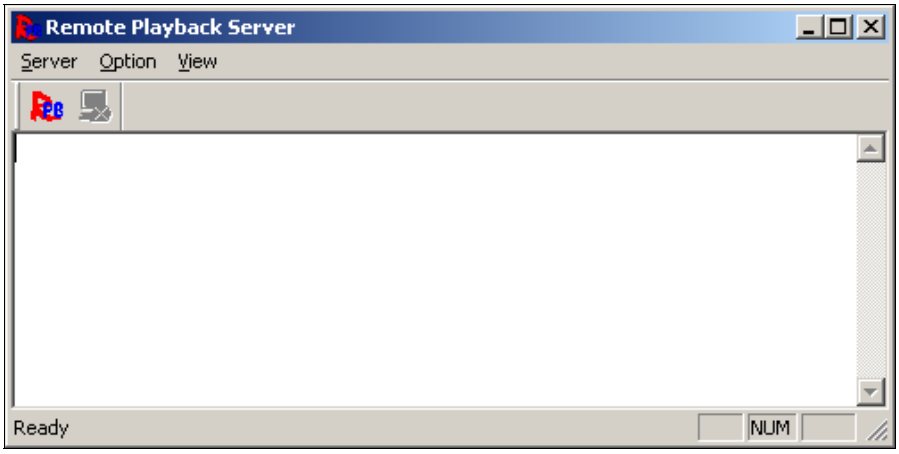


Figure 4-30

2. Click the **Start Service** button . A valid ID and Password are required.

   In the RPB window, you can see the message, for example, "*1/4/2005 6:14:36PM Start Sever*", indicating when the server is activated.

To stop a connection, click the **End Server** button . A valid ID and Password are required.
To minimize the RPB window in Windows taskbar, select **Option** from the menu bar, and then select **Hide When Minimize**.

Configuring RPB Server

To configure the RPB Server, select **Option** from the menu bar, and then select **Setup**. This displays the following dialog box.

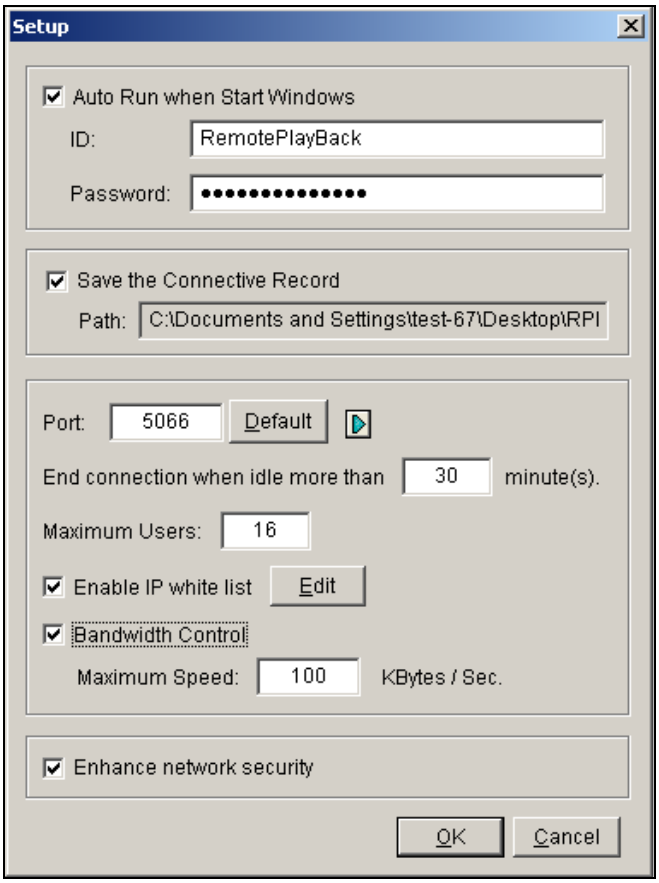


Figure 4-31

[Auto Run when Start Windows] Automatically starts RPB Server at Windows startup. Enter an ID and a password that are allowed to use the server.

[Save the Connective Record] Check to create a log that keeps the login and logout status of the server. Type a storage path in the Path field.

[Port] The default port is 5066. To automatically configure the port on your router by UPnP technology, click the **Arrow** button. For details, see *UPnP Settings*, Chapter 6 in the *User's Manual*.

[End connection when idle more than x minute(s)] Stops the connection after the assigned idle minutes.

[Maximum Users] One RPB Server allows the maximum of 16 connections. You can determine the maximum number of client PCs allowed to log in your RPB Server.

[Enable IP White List] Check the item and click **Edit** to create a list of IP addresses only which are allowed to access the RPB server. For the setting details, see *IP White List Settings* in Chapter 6.

[Bandwidth Control] Check to prevent overloading on slow network. You can set the bandwidth from 0 to 100,000 Kbytes to transfer in one second.

[Enhance network security] Enable to enhance Internet security. Please note when the feature is enabled, the subscribers using earlier version than 7.0 cannot access the RPB any more.

Working with Remote Playback Client at the Client PC

RPB Client software is to be installed at the client PC, and the software is included in the Surveillance System Software CD. Install and execute **Remote Playback Client Site.**

Camera views from different servers may be displayed in a single 16-channel screen view. Clicking the **Page Select** button turns the screen view to the next page. Maximum two pages (total 32 channels) may be displayed in one RPB Client.

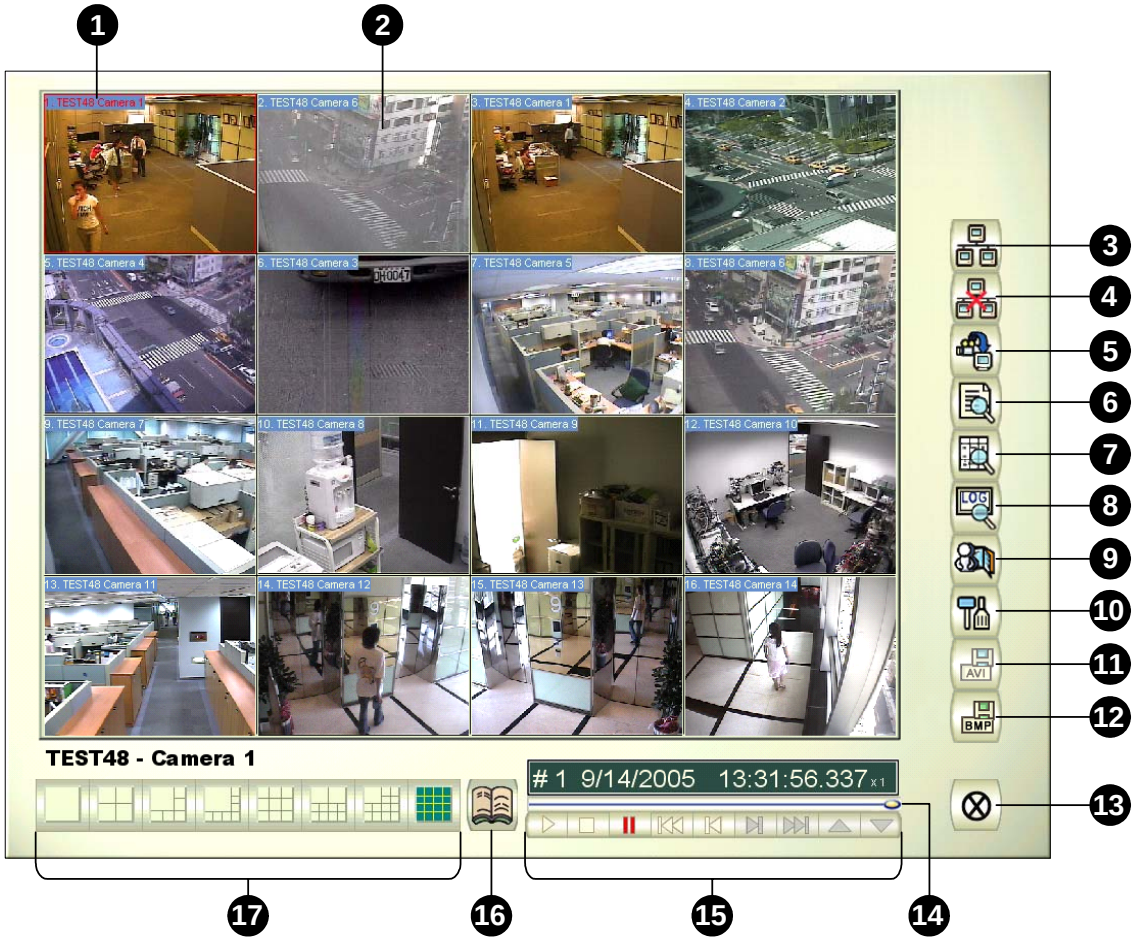


Figure 4-32

The controls in the RPB Client:

No	Name	Description
1	Camera Name	Indicates the given camera name.
2	Camera View	Displays playback video.
3	Connect	Sets the connection to the RPB server.
4	Disconnect	Closes all or selected connections to the RPB server.
5	Download (Play) Remote Video	Downloads and plays the remote video.
6	Play Local Video	Plays back video files at the client computer.
7	View List	Keeps record of connection activity.
8	Connection Record	Keeps track of the connections.
9	Address Book	Creates a quick connection to the RPB Server.
10	Preference Setting	Sets download status, text display and panel resolution.
11	Save As AVI	Saves a video file as avi or exe format. Refer to *Exporting Video* earlier in this chapter.
12	Save As BMP	Saves a video image as bmp format.
13	Exit	Closes or minimizes the RPB Client window.
14	Scroll Bar	Moves forward and backward of the playback video.
15	Playback Panel	Contains typical playback buttons.
16	Page Select	Toggles between channels 1~16 and 17~32.
17	Screen Division	Sets the screen divisions.

Connecting to RPB Server

Click the **Connection** button on RPB Function Panel (No.3, Figure 4-32). This displays the following Connect to dialog box.

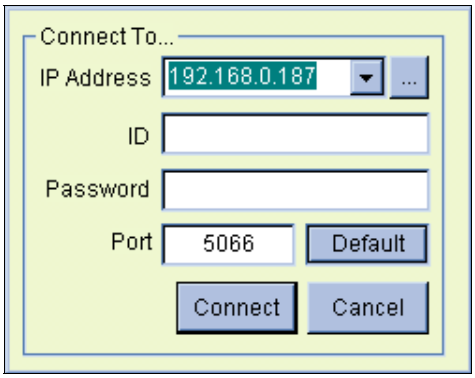


Figure 4-33

Enter the login information. You may enter the IP address or the domain name of the RPB server. Alternatively, you may click the drop-down list to find recently visited servers, or click the **Browse** button to select a RPB server from the folder.

Disconnecting from RPB Server

Click the **Disconnect** button (No.4, Figure 4-32) and select to close all connection by choosing **All Connections**, or close only the selected connections by choosing **Select Disconnection**.

Downloading and Playing Remote Video

There are two options to download and play remote video: Normal and Advanced.

[Normal] Select **Normal** from the **Download (Play) Remote Video** button (No.5, Figure 4-32). This displays the following Search & Download panels.

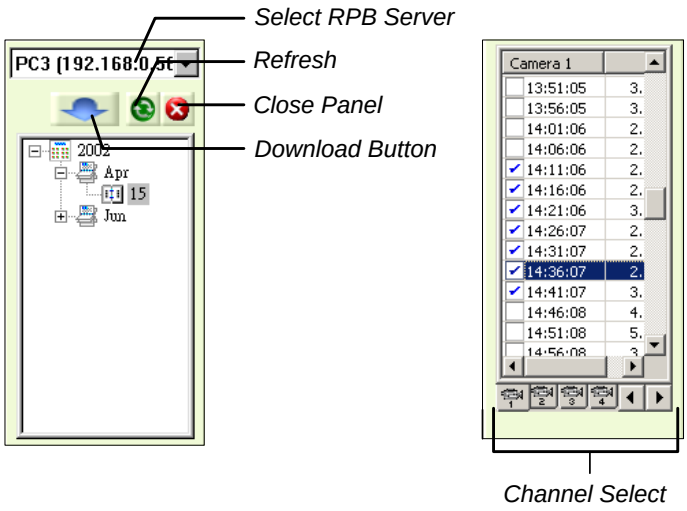


Figure 4-34

Follow the steps to search desired files:

1. Select the desired RPB server from the drop-down selection field.
2. Choose the required date from tree folder.
3. Select the required camera from the Channel Select tab, and select the video files from Event List Window.
4. Click the **Download** button to download by the four available options:
   - **Download & Play:** Play the selected files while downloading into the RPB Client.
   - **Just Download:** Download files only.
   - **Just Play:** Play files without downloading them into the RPB Client.
   - **Download & Play (Period):** Download files by frames. Select only one file at a time to apply this function.

[Advanced] Select **Advanced** from the **Download (Play) Remote Video** button (No.5, Figure 4-32). This displays this following dialog box.

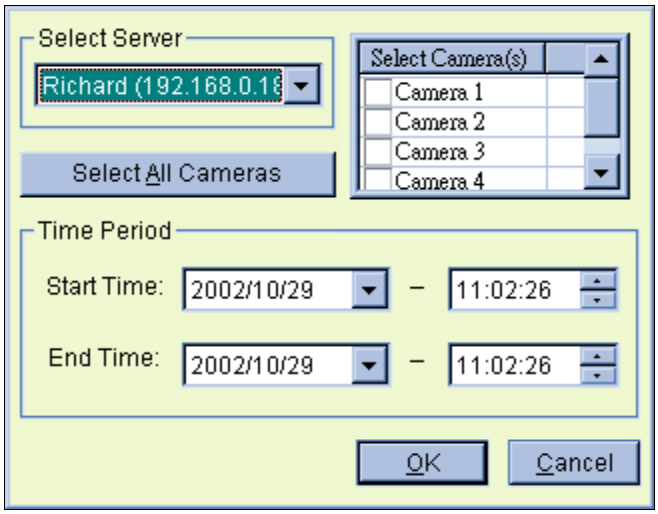


Figure 4-35

The files can be searched by time and date, and by camera. Follow these steps to select cameras to load at specified times:

1. Select the desired RPB Server from the drop-down selection field.
2. Select the required camera from Select Camera(s) window, or click **Select All Cameras** button to select all cameras.
3. Specify the time range. Click **OK** to start the search.

Note: A warning message may appear if the downloaded file size is greater than the designated storage space.

Playing Local Video

After loading the video files from the server PC to the client PC, click the **Play Local Video** button (No.6, Figure 4-32) to play back the files at the client PC through the RPB Client.

View List

The list keeps record of connection activity, and it is available in four listing options:

[Channel List] Lists all RPB Servers and their respective cameras. Click the **Up and Down** buttons to move up and down the list. The **Disconnect** button ends the connection of the selected camera. The **Exit** button closes the list while all connections remain.

[Connection List] Indicates the number of files currently engaged in the connecting activity. The number shown in the Total Works field drops as connection completes. Click the **Work List** to show the type of connecting activity engaged, listed in the Type field. Click the **Back** button to go back to the list; the **Disconnect** button to end the connection; the **Exit** button to close the list.

[Download List] Displays a list of files that is currently being downloaded to the RPB Client. The Ratio field shows each file's download progress and the Save Path field shows the location where files are downloaded to.

[Download History] Displays a history list of downloaded files in the RPB Client. Double-click the list will play back related files in the RPB monitoring window.

Connection Record

Connection Record keeps track of the connections, which makes your next connection more easily.

[Save Connective Status] Saves current connections to a path. When open the RPB Client next time, click the **Connection Record** button and then select **Load Connective Status** (see descriptions below) to look for this path for fast access to current connections.

[Load Connective Status] Loads connection status that was previously saved into a file by Save Connective Status, described as above, into the RPB Client.

[Load Resume File] If the connections were ended, select this option to continue the downloading process.

Address Book

The Address Book not only keeps connection information about the RPB sever, but also allows quick connection and auto login to the RPB server. Follow these steps to create an entry in Address Book:

Click the **Address Book** button (No.9, Figure 4-32) to bring up the following dialog box.

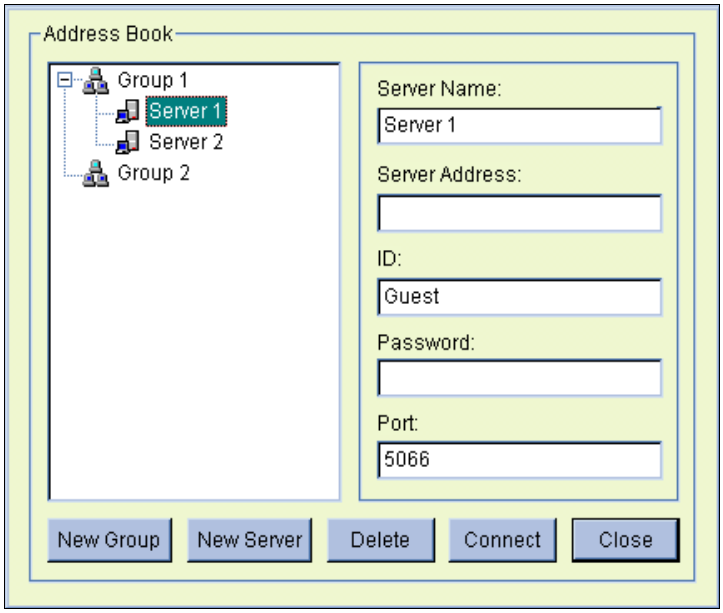


Figure 4-36

Click the **New Server** button and provide information to the fields:

- **Server Name:** Give a descriptive name to the server.
- **Server Address:** Enter the IP address or domain name of the server.
- **ID:** Enter an ID that was already created in the server.
- **Password:** Enter the password associated with the ID.
- **Port:** Use the default port 5066, unless otherwise necessary.

You may create a group (click the **New Group** button) before adding any user. Click on any group, and then click the **New Server** button to add users to that group.

Click the **Close** button to finish the setup; **Delete** to remove the entry from Address Book; **Connect** to connect the RPB Client to the RPB Server instantly.

Preference Settings

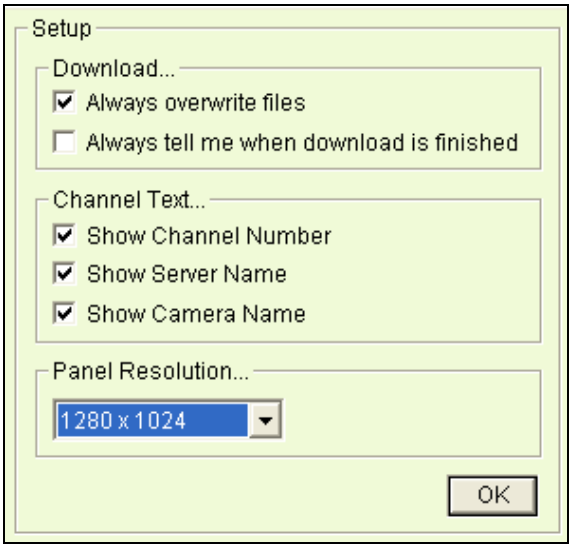


Figure 4-37

[Download] The options allow you to specify how your files are saved when your storage space is full.

[Channel Text] The selections determine the effect you want your camera view to display.

[Panel Resolution] Select the screen resolution of the RPB Client window.

RPB Client Playback Control Panel

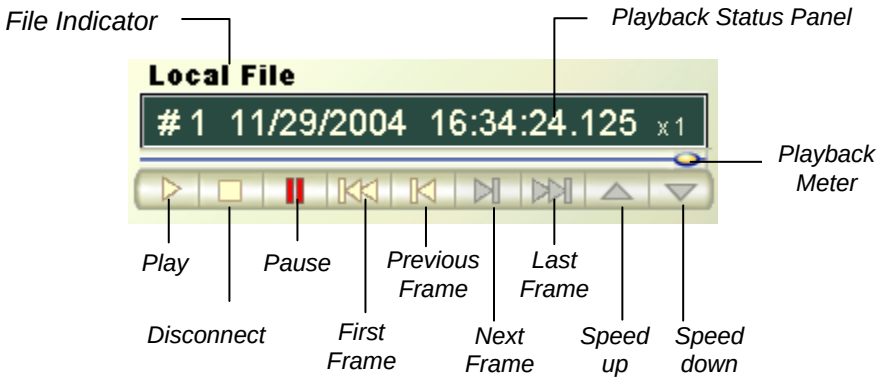
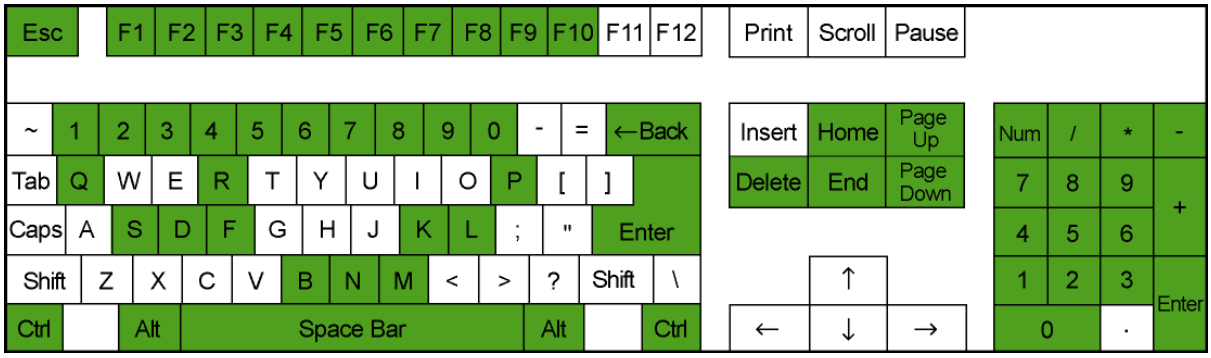


Figure 4-38

Fast Key Reference

This feature lets you view the fast key window of ViewLog, giving you an instant reference. Click the **Tools** button on the main screen, and then select **Fast Key** to display the window.


Esc
F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12
Print Scroll Pause
~ 1 2 3 4 5 6 7 8 9 0 - = ←Back
Tab Q W E R T Y U I O P [ ]
Caps A S D F G H J K L ; " Enter
Shift Z X C V B N M < > ? Shift \
Ctrl Alt Space Bar Alt Ctrl
Insert Home Page Up
Delete End Page Down
↑
← ↓ →
Num / * -
7 8 9 +
4 5 6
1 2 3 Enter
0 .

Key	Function
Esc	Exit
Enter	Play/Pause
Back	Rewind/Pause
Space	Stop
Num 1-9, 0 and F1~F6	Switch the camera channel
Ctrl+Num 1-9, 0 and F1~F6	Switch the audio channel
Ctrl+F8	Display/Hide the Basic Search dialog box
Ctrl+B	Display/Hide the Backup dialog box (select an event on the Event List)
Ctrl+D	Display/Hide the Delete dialog box (select an event on the Event List)
F7	Switch between single and mutli views
F8	Display/Hide the Advance Search dialog box
F9	Display/Hide the Event List window
F10	Connect to Remote ViewLog Service
Alt+”M”	Turn the sound on/off
Alt+”N”	Go to the next event
Alt+”P”	Go to the previous event
B, b	Display/Hide the Backup dialog box
D, d	Display/Hide the Delete dialog box
F, f	Start/Stop full screen view
K, k	Display/Hide the Fast Key Reference table
P, p	Print the image
Q, q	Switch the screen division

R, r	Reload video event list
S, s	Display/Hide the Save AVI File dialog box
Page Up	Move one frame back
Page Down	Move one frame forward
Home	Go to the first frame
End	Go to the last frame
+	Zoom in
-	Zoom out
*	Increase playback speed
/	Decrease playback speed
Delete	Delete events

CHAPTER

5

Backing Up and Deleting Files

Video files can be copied from the hard disk to external storage media, such as CD-R, DVD, MO, or ZIP drives. Video files saved on the hard disk can be easily deleted as well. This chapter explains how to back up and delete video/audio files using Backup System and ViewLog.

Backing Up Files Using Backup System

Video and audio files may be backed up to a CD-R through a third-party application, such as Nero or EasyCD, as long as it contains the feature of “paste”. Nero is used as an example below.

1. Go to **Windows Start**, and then select **Backup System** from the system folder. The DMBackUp window appears.

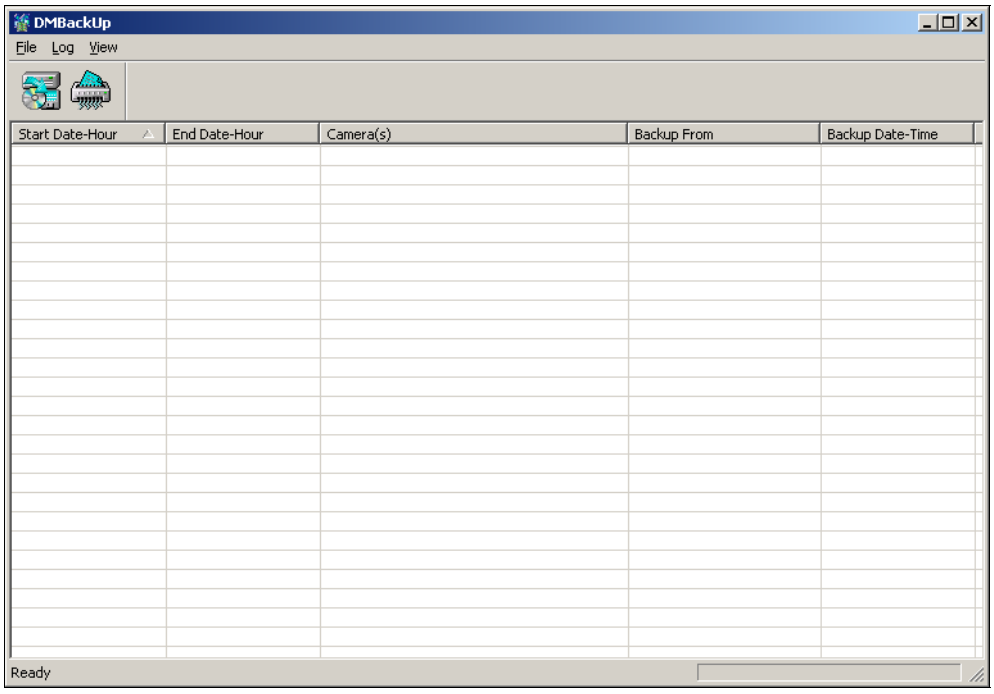


Figure 5-1 *The DMBackUp Window*

2. Click the **Backup** button on the toolbar to bring up the following Backup Log dialog box. Alternatively, you may click **Log** and select **Backup** from the menu bar.

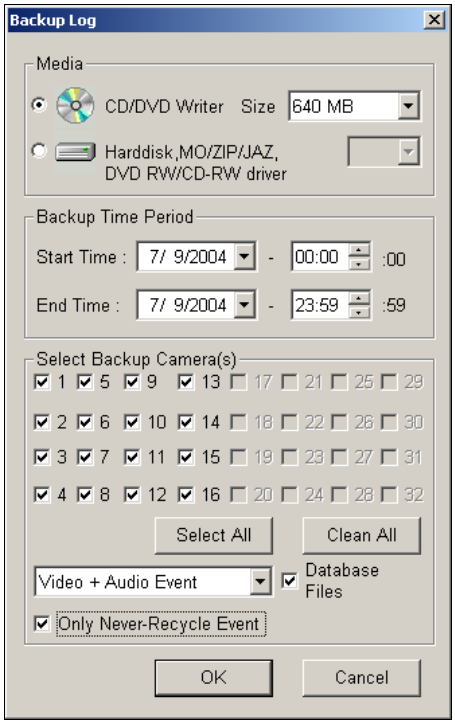

Backup Log
Media
CD/DVD Writer Size 640 MB
Harddisk,MO/ZIP/JAZ, DVD RW/CD-RW driver
Backup Time Period
Start Time : 7/ 9/2004 - 00:00 :00
End Time : 7/ 9/2004 - 23:59 :59
Select Backup Camera(s)
1 5 9 13 17 21 25 29
2 6 10 14 18 22 26 30
3 7 11 15 19 23 27 31
4 8 12 16 20 24 28 32
Select All
Clean All
Video + Audio Event
Database Files
Only Never-Recycle Event
OK
Cancel

Figure 5-2 *Backup Log*

[Media]: Select the media where you want to back up the files.

[Backup Time Period]: Specify a time period for backup. The minimum time for backup is 1 minute.

[Select Backup Camera(s)]: Select desired cameras for backup

- **The drop-down list:** Select the types of video events for backup. Back up video and audio events together, video events only, or audio event only.
- **Database Files:** Check this item to back up the files from System Log.
- **Only Never-Recycle Event:** Check this item only to back up the never-recycle events.

3. After the above settings, click **OK** to bring up the following window. It shows the information about the backup files.

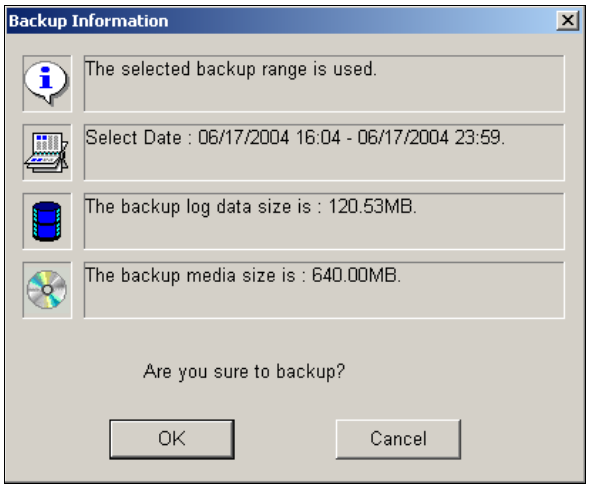

Backup Information
The selected backup range is used.
Select Date : 06/17/2004 16:04 - 06/17/2004 23:59.
The backup log data size is : 120.53MB.
The backup media size is : 640.00MB.
Are you sure to backup?
OK
Cancel

Figure 5-3 *Backup Information*

4. Click **OK** if all the information stated is correct. This pastes all copied files to the CD writer.
5. When the following message appears, click **OK**.

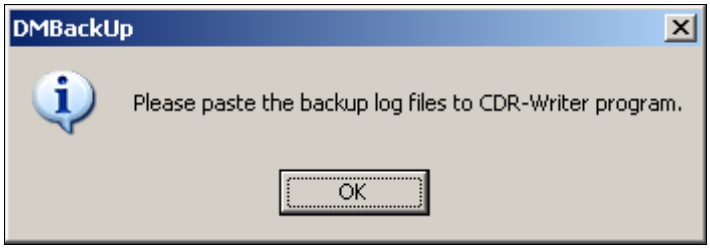


Figure 5-4

6. Open your CD writer program. Right-click anywhere on the program interface to call up a menu, and then select **Paste**.

Figure 5-5 *Pasting files*

7. After pasting, you can see backup files pasted onto the CD writer program.

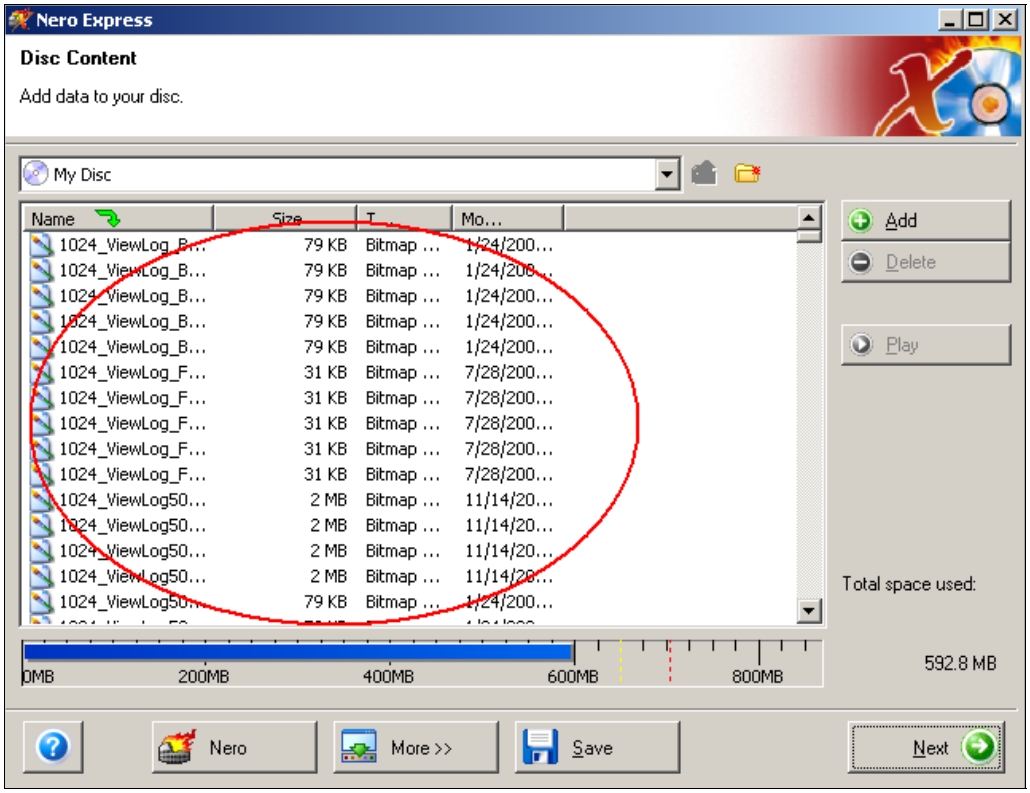


Figure 5-6 *The pasted files on the CD writer program*

8. You can then start to copy these files onto your CD-R.

Backing Up Log Data Using System Log

Using the System Log, you can back up all log data or filtered data based on criteria.

1. To open the System Log, click the **ViewLog** button on the main screen, and select **System Log.**
2. To open the Advanced Log Browser, click **[...]** button at the top right corner on the System Log window.
3. Click the **Backup** button on the toolbar. This dialog box appears.

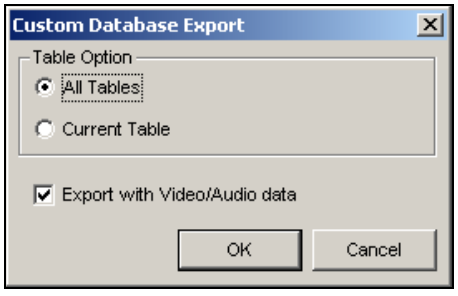


Figure 5-7

[Table Option]

- **All Tables:** Backs up all log data.
- **Current Table:** Backs up only the log table you are currently at.

[Export with Video/Audio data] Backs up video/audio attachments with log data.

4. Click **OK**. The Backup dialog box appears (Figure 5-8).
5. In the Media section, select the destination to back up the log files, and then click **OK** to back up.

Note:

1. To back up the filtered data, use the **Filter** function to define search criteria first.
2. To open the backup data, run **EZSysLog.exe** from the backup file.

Backing Up Files Using ViewLog

Using ViewLog, you have three backup options:

- Back up to hard disk
- Create CD/DVD using a third party software, e.g. Nero, Roxio, etc.
- Create CD using Windows XP/Server 2003 inbuilt burning software

To back up files:

1. On the function panel, click the **Tools** button (No.14, Figure 4-2), and then select **Backup**. This dialog box appears.

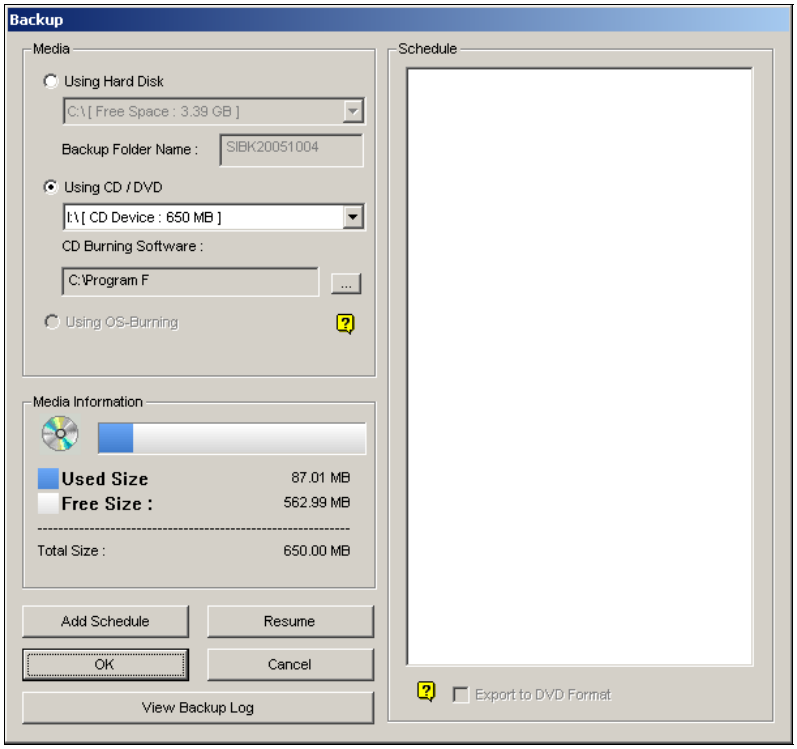


Figure 5-8

2. Select a destination media to back up files.

   [Media]

   - **Using Hard Disk:** Click to back up files to the hard disk you select.

     Backup Folder Name: Enter a desired name for the backup folder.

   - **Using CD/DVD:** Click to back up files to the CD or DVD media using a third-party software.

     Click the **[…]** button to select a desired burning software (.exe file). When you click **OK** on the Backup dialog box (Figure 5-8), the system will ask you to paste the backup files to the CDR-Writer program (Figure 5-4), and call up the assigned burning software for you to paste and backup.

   - **Using OS-Burning:** This option is only available when you use Windows XP or Server 2003. It burns files using the inbuilt software of the operation system. Note that your hard disk needs at least 1 G buffer space.

   [Media Information] This section indicates free and used space on CD/DVD media or the local disk.

3. Click the **Add Schedule** button to define a time period for backup.

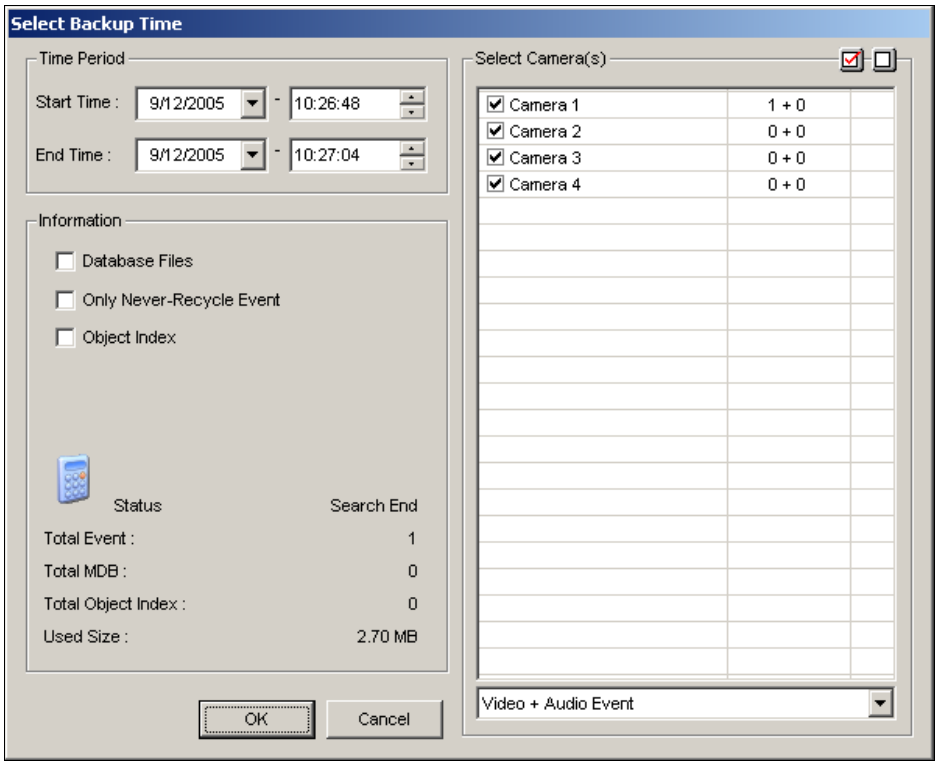


Figure 5-9

[Time Period] Specify the time periods for backup.

[Select Camera(s)] Click to select the camera(s) for backup. The number of video and audio files of each camera is indicated respectively, e.g. “Camera 1 1+0” means Camera 1 has 1 video file and 0 audio file.

- **Video + Audio drop-down list:** Select the types of video events for backup.

[Information]

- **Database Files:** Click to back up the files from System Log.
- **Only Never-Recycle Event:** Click to only back up the never-recycle events.
- **Object Index:** Click to back up the Object Index files.
- **The Status and Search End section:** Indicates the number of backup files and their total size. (Total MDB refers to the System Log files.)

4. Click **OK** to add the schedule. You can repeat step 3 to create up to 10 periods of time.
5. Click **OK** on the Backup dialog box for backup.

Tip: If you just want to back up a specific event or several events of one day, select the event or multiple events on the Video Event list, and right-click to select **Backup.** The Select Backup Time dialog box will then appear, and you can follow the steps described above to back up files without setting up the time period.

Note:

1. If you are unable to record a CD, make sure the CD recording is enabled in your CD burner: open **My Computer**, right-click the CD Drive icon, click **Properties**, click the **Recording** tab, and then check **Enable CD recording on the drive**.
2. The **Export to DVD Format** option, at the right bottom of Backup dialog box (Figure 5-8), outputs your files in DVD movie format, meaning that it will play in any DVD player that supports writable DVD disks. To enable this option, files recorded by the GV-Hybrid DVD card need to be selected first (see the Select Camera(s) option), and a DVD±RW disk is required as well.

Backing Up at the Client PC

The program **DMBackUp500.exe**, located in the system folder, makes it possible to back up video files at a client PC. Before you start, make sure both your system folder (GV-650 folder, for example) and video files you wish to save are made available to network users, and done through proper setups in Windows Sharing And Security. After the folder and files are made available, follow these steps:

1. At any client computer, go to **My Network Places** in Windows.
2. Find the server computer where the GV-System is located, and then locate **DMBackUp500.exe** in the system folder, as shown below (assuming that the system is running GV-650 on drive C:).

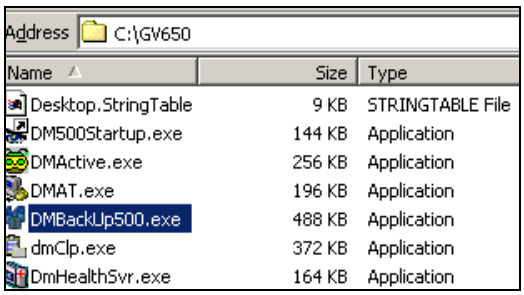


Figure 5-10 *Executing DMBackUp 500.exe*

3. Double-click to run the program.
4. You should be promoted with the DMBackUp dialog box, as shown in Figure 5-1. Follow the same steps as instructed in *Backing Up Files Using Backup System*. This backs up files to the client PC.

Deleting Files Using Backup System

To delete files using Backup System, follow these steps:

1. In the DMBackUp window, click the **Delete** button. Alternatively, you can click **Log** on the menu bar, and select **Delete** to bring up the following Delete Log dialog box.

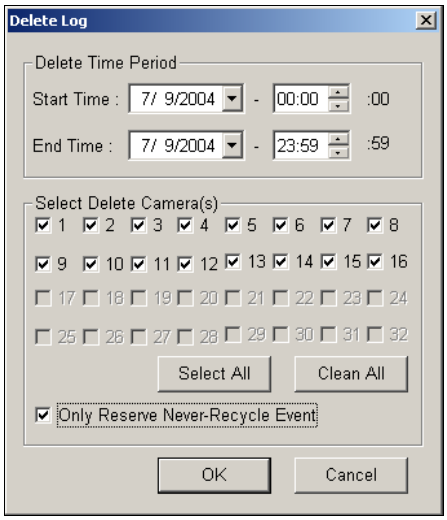

Delete Log
Delete Time Period
Start Time : 7/ 9/2004 - 00:00 :00
End Time : 7/ 9/2004 - 23:59 :59
Select Delete Camera(s)
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24
25 26 27 28 29 30 31 32
Select All
Clean All
Only Reserve Never-Recycle Event
OK
Cancel

Figure 5-11 *Delete Log*

2. Define a time period for the file deletion. The minimum time for deletion is 1 minute.
3. Select the desired camera channels for the file deletion.
4. If you like to reserve the never-recycling events after the deletion, check **Only Reserve Never-Recycle Event**.
5. Click **OK**. This brings up the Delete Information dialog box, indicating how many files will be deleted, and how much storage space will be free.

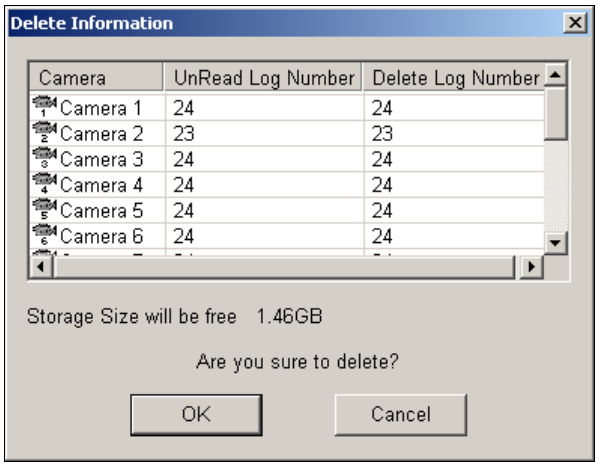


Figure 5-12 *Delete Information*

6. Click **OK** to start the deletion.

Deleting Files Using ViewLog

To delete files using ViewLog, follow these steps:

1. On the function panel, click the **Tools** button (No. 14, Figure 4-2), and then select **Delete**. This dialog box appears.

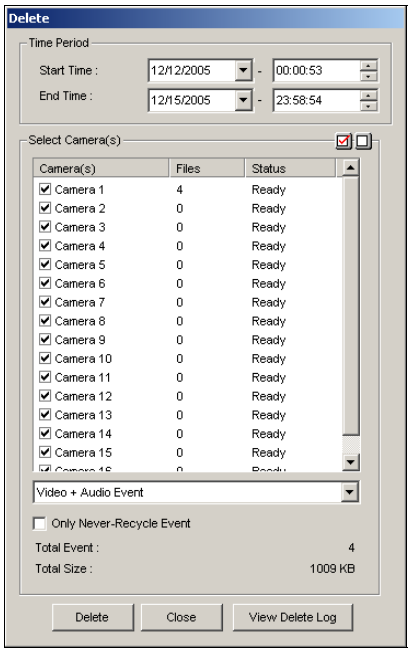


Figure 5-13

2. Define the time period for file deletion.
3. Uncheck the cameras, which you don't want to delete the files of.
4. Use the drop-down list to select the types of events to be deleted, e.g. video, audio or both together.
5. If you only want to delete the never-recycle events, check the **Only Never-Recycle Event** option.
6. Click the **Delete** button.

Tip: If you just want to delete a specific event or several events within one day, select the event or multiple events on the Video Event list, and right-click to select **Delete**. The Delete dialog box will then appear, and you can follow the steps described above to delete files without setting up the time period.

Note:

1. If you want to view the history of file deletion, click the **View Delete Log** button.
2. To view the information of files from a desired camera, right-click the camera and select **Event View**.

Repairing Damaged File Paths

The only way to correctly delete video and audio files is through the operation you've just performed in the previous section. If you move or delete a video file using Windows Explorer or Windows File Manager, GV-System will not know what you have done, unless you've run the **Repair DataBase Utility**. This Utility comes with the installation of Main System. Follow these steps to repair the paths:

1. Go to the **Windows Start** menu, select **Programs**, point to the **GV folder**, and then select the **Repair DataBase Utility**. A valid ID and password are required.
2. When the Select Camera for Repair Database dialog box appears, select the desired cameras to fix the file paths.
3. Click **OK** to bring up the following RepairDB dialog box.

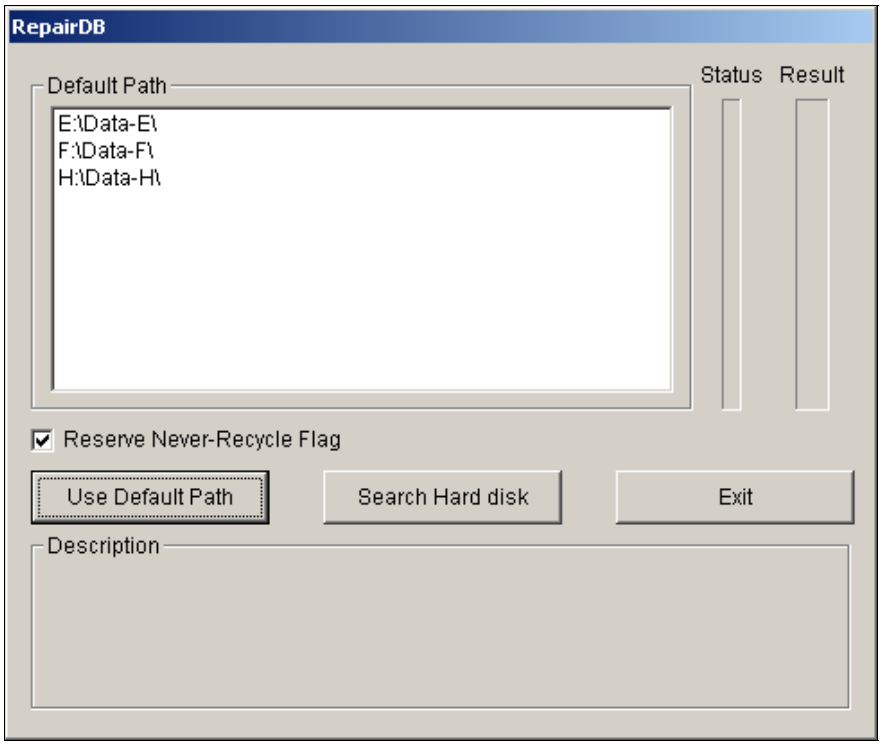


Figure 5-14 *The RepairDB Dialog Box*

4. Click the **Use Default Path** button to start the path re-building at the locations specified to save the files in the Main System. For details, see *Log Storage*, in Chapter 1.
5. Click the **Search Hard Disk** button to search the entire PC, and then to re-build paths for the files recorded by GV-System.

Note:

1. The repair and the search function will not apply to the files that have been renamed manually.
2. Use this Utility if encountering any of the following scenarios in ViewLog:

(1) A question mark appears right before a video file in the Video Event list.

(2) When you click the **Playback** button, no video is displayed even a file is selected.

CHAPTER

6

Viewing Live Video Using WebCam

With Microsoft Internet Explorer at the remote PC, it is possible to view live videos, download and play back video files, manage systems within the security network, control PTZ camera and I/O devices via the WebCam server.

Before starting the WebCam, make sure your system meets the following minimum requirements:

OS	Windows 2000, Windows XP, Server 2003
CPU	Pentium 4, 2.0G
Memory	256MB RAM
Hard Disk	60GB
VGA	NVIDIA GeForce II 32MB, 1024x768 screen resolution
Network	TCP/IP
Web Browser	IE6.0, Netscape Navigator (with limited functionality)
DirectX	Version 9.0 or above

Configuring WebCam Server

GV-System is built-in with a web sever. Click the **Network** button, and then select **WebCam Server** to display the following Server Setup dialog box.

WebCam Server Settings

The Server Setup dialog box contains these tabs: (1) General, (2) Server, (3) Video, (4) RPB, (5) Audio, (6)JPG and (7) 3G.

[General]

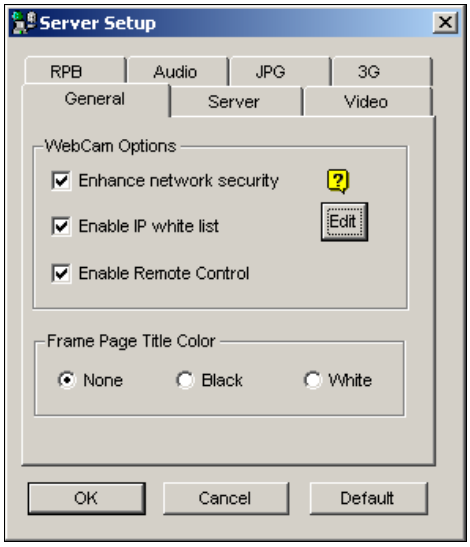


Figure 6-1 *Server Setup- General*

[WebCam Options]

- **Enhance network security:** Check this item to enhance network security on WebCam. Please note when the feature is enabled, the users using earlier version than 8.0 cannot access WebCam applications any more.
- **Enable IP White List:** Create a list of IP addresses allowed to connect to WebCam. For details, see *IP White List Settings* later in this chapter.
- **Enable Remote Control:** Check this item to use **Remote Configuration** and **Enable/Disable I/O** functions on WebCam.

[Frame Page Title Color] Select the color of date, time and camera stamps on the frame.

[Server]

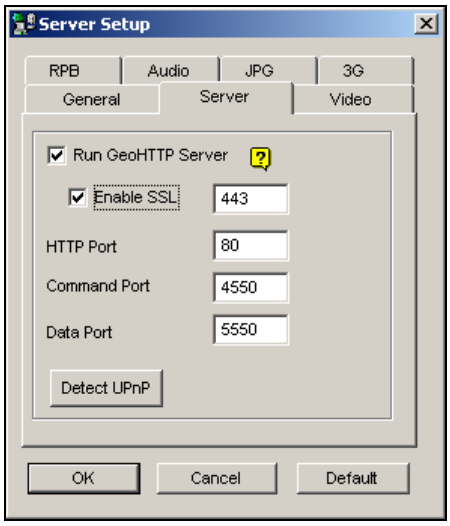


Figure 6-2 *Server Setup- Server*

[Run GeoHTTP Server] Enable Geo-developed HTTP server or use your own HTTP server. Command Port is the port used to access WebCam, and Data Port is the port used to transfer data over Internet.

[Enable SSL] Enable the Secure Sockets Layer (SSL) protocol to ensure the security and privacy of Internet connection.

[Detect UPnP] For details, see *UPnP Settings* later in this chapter.

[Video]

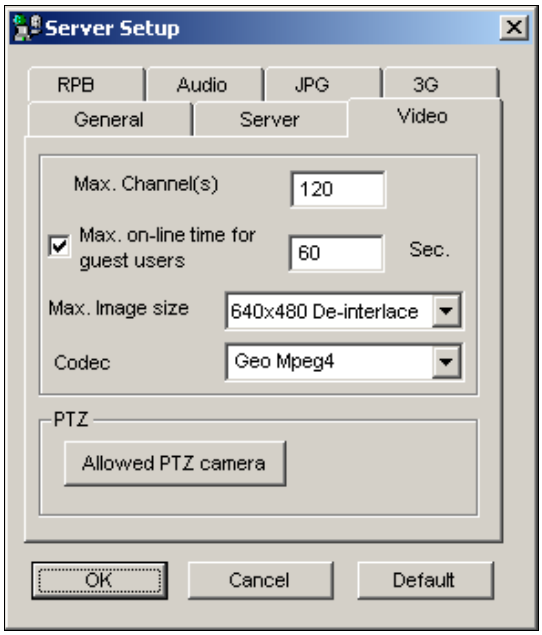


Figure 6-3 *Server Setup- Video*

- **Max. Channel(s):** Specify the number of channels allowed to access WebCam, with the upper limit of 200 channels.
- **Max on-line time for guest users:** Specify the time length allowed for a guest user to connect to WebCam. The time range is between 10 to 3600 seconds.
- **Max Image size:** Select a resolution. The default resolution on WebCam is 320 x 240. If you want to apply the 640 x 480 (De-interlace) or 720 x 480 (De-interlace) resolution, you also have to configure Video Source. Click the **Configure** button on the main screen, and then select **Video Source**. In the Video Resolution field, select 640 x 240 or higher resolutions, and then click **OK** to apply.
- **Codec:** WebCam provides two codec options: Geo Mpeg4 and Geo H.264.
- **Allowed PTZ camera:** The option allows you to control selected PTZ cameras at a remote computer. Click the button and select the desired PTZ cameras to work on WebCam.

[RPB]

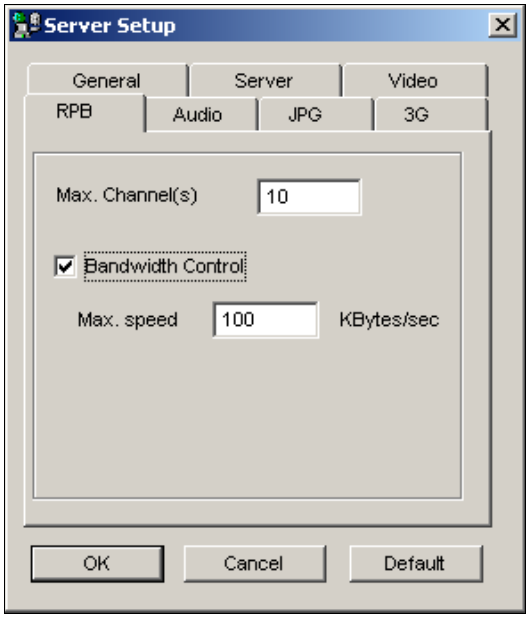


Figure 6-4 *Server Setup- RPB*

This feature is used to prevent overloading on slower networks.

- **Max. Channel(s):** Specify the number of channels allowed to download to a client PC.
- **Bandwidth Control:** Enable and specify the rate of data to be transferred over network. The option effectively controls the bandwidth being used by the WebCam server.

[Audio]

Connecting Audio Devices

Via WebCam, you can access live audio at a remote site and talk to the server site. This feature is useful when the remote site requires speaking to the personnel at the server site in case of emergency. Before using this feature, make sure all the necessary hardware are in place:

1. If you purchase a BNC connector GV-System, connect the audio extend card to the system (see Chapter 2 in the *Installation Guide*). If you purchase a D-type connector GV-System, audio extension cable lines should come available with the D-Type extension cables. For GV-1000, the audio card must be purchased separately.
2. Make sure your sound card is already inside the computer. Connect a multimedia speaker to the audio output of your computer's sound card.
3. Connect a desktop microphone to the input of the audio extension card (or cable line).

Audio Setup

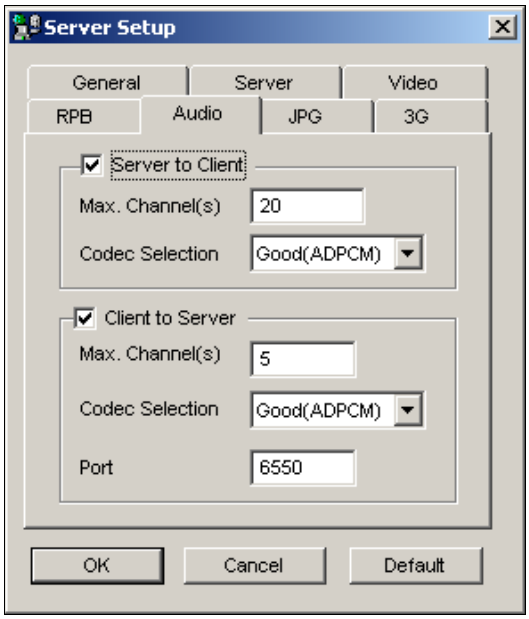


Figure 6-5 *Server Setup- Audio*

[Server to Client] Allows a client PC to access live audio from the server site.

- **Max. Channel(s):** Enter the number of client PCs allowed to access live audio, with the upper limit of 40 PCs.
- **Codec Selection:** Select the audio codec. ADPCM requires 4KByte bandwidth, while G.723 requires only 0.66KByte bandwidth. But ADPCM offers much better audio quality than G.723.

[Client to Server] Allows a client PC to speak to the server site.

- **Max. Channel(s):** Enter the number of client PCs allowed to speak to the server site, with the upper limit of 20 PCs.
- **Codec Selection:** The same as the above Codec Selection.
- **Port:** The default audio port is 6550.

Note: If your server site is installed a firewall, configure the port settings in the firewall as 4550, 5550, 6550 and 80.

[JPG]

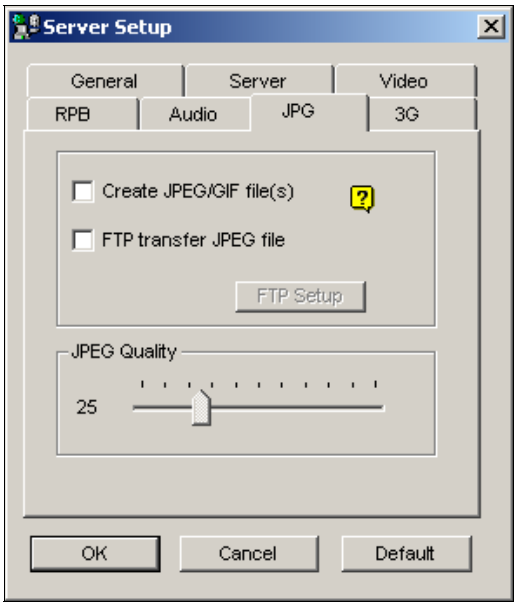


Figure 6-6 *Server Setup- JPG*

- **Create JPEG/GIF file(s):** Allows the connection to G-View (see *Connecting G-View to GV-Server*, later in this chapter), i-Mode (see *I-Mode Phone*, later in this chapter), and JPEG Image Viewer (see *JPEG Image Viewer*, later in this cheater). If the feature is enabled, use the slide bar to adjust JPG image quality. The bigger the number (sliding it towards right), the better the image quality and the bigger image file size.
- **FTP Transfer JPEG file:** Allows you to view the recording files in a folder tree structure. For details, see *FTP Server Settings*, later in this chapter.

Note: The Create JPEG/GIF file(s) item will not be available when you enable **Enhance Network Security** in Figure 6-1.

[3G]

These settings allow you to stream video and audio on your 3G-enabled mobile phone. For more information on 3G mobile phone connection, please check our website.

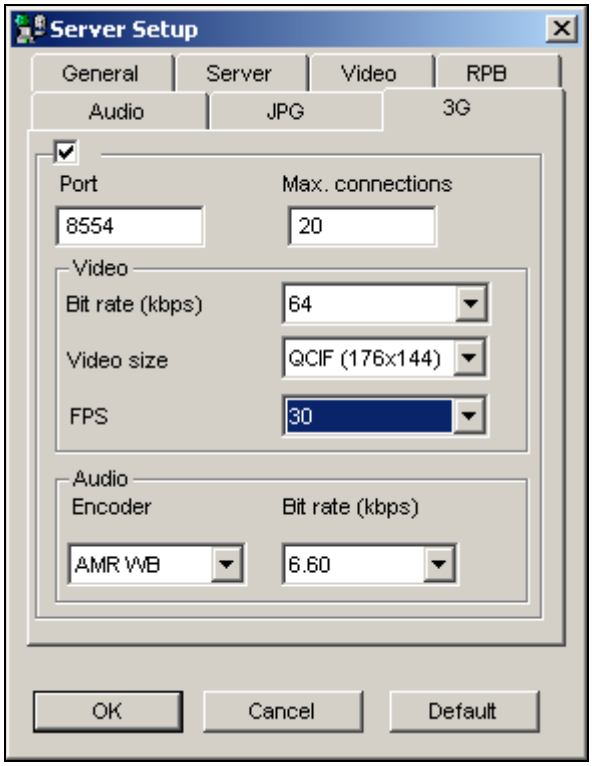


Figure 6-7

- **Port:** The default communication port is 8554.
- **Max. Connections:** Specify the number of users that can connect to this server. Set the number to be between 1 and 20.

[Video]

- **Bit rate (kbps):** Select a proper bit rate for video file transmission. Larger bit rate means better quality, but it also required larger bandwidth.
- **Video Size:** Select **QCIF (176x144)** or **sub-QCIF (128x96)** for transmission. Larger video size means better quality, but it also requires larger bandwidth.
- **FPS:** Specify the number of frames to be transferred per second.

[Audio]

- **Encoder:** For narrowband users, select **AMR**; and for wideband users, select **AMR WB**.
- **Bit rate (kbpts):** Select a proper rate for audio file transmission.

Note: To enable 3G services on your mobile phone, consult your network operator.

IP White List Settings

The feature lets you create a list of IP addresses only which are allowed to connect to the WebCam server. To enable the function, follow the steps below.

1. On the main screen, click the **Network** button, and then select **WebCam Server** to display the Server Setup dialog box (see Figure 6-1).
2. In the General tab, check the **Enable IP white list** option, and then click the **Edit** button. This IP White List window appears.

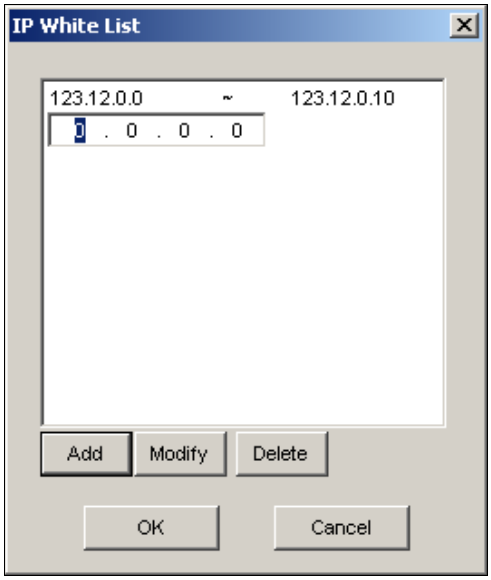


Figure 6-8 *IP White List*

3. Click **Add** to enter an IP address or a range of IP addresses. For this example, only the IP range from 123.12.0.0 to 123.12.0.10 is allowed to connect to WebCam.
4. Click **Modify** to change a created IP address. Click **Delete** to delete a created IP address. Click **OK** to apply the settings.

UPnP Settings

WebCam Server supports UPnP technology (Universal Plug and Play) to allow automatic port configuration to your router.

In order for UPnP to be enabled, the following must be true:

- Windows XP Service Pack 2 is required.
- Windows XP must be configured to use UPnP (see below)
- UPnP must be enabled on your router (consult your router's documentation)

Enabling UPnP in Windows XP

1. Go to Windows Start, click **Start** button, point to **Settings**, and select **Network Connections**.

   This window appears.

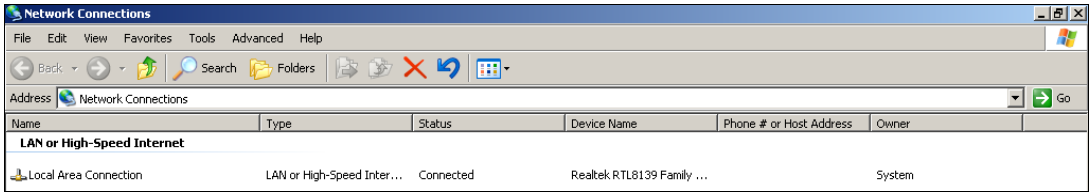

Network Connections
File Edit View Favorites Tools Advanced Help
Back Search Folders
Address Network Connections
Go
Name Type Status Device Name Phone # or Host Address Owner
LAN or High-Speed Internet
Local Area Connection LAN or High-Speed Inter... Connected Realtek RTL8139 Family ... System

Figure 6-9

2. Right-click one **Local Area Connection**, select **Properties**, and click the **Advanced** tab.

   This dialog box appears.

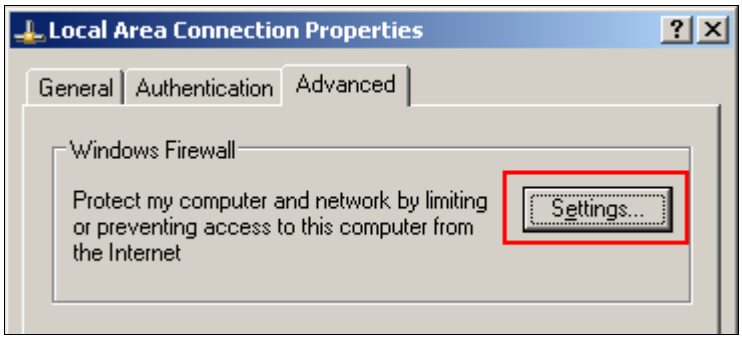


Figure 6-10

3. Click the **Settings** tab, and click **Exceptions** tab. This dialog box appears.

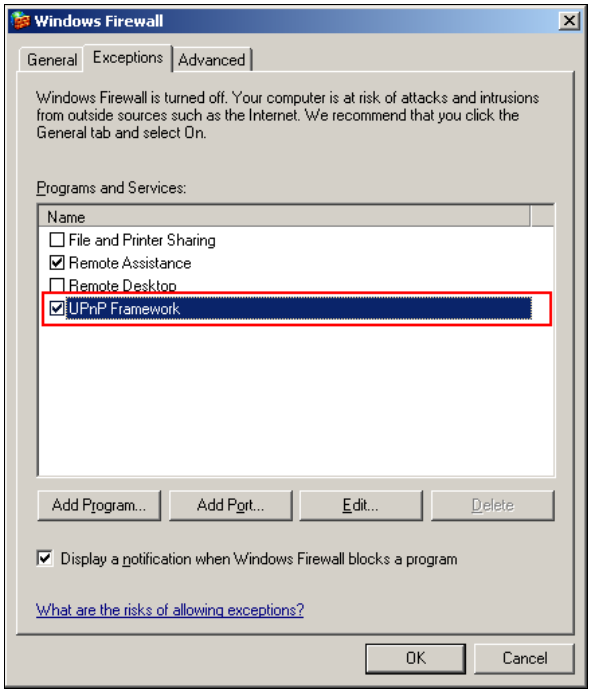


Figure 6-11

4. Check **UPnP Framework**, and click **OK**.

Enabling UpnP in WebCam

1. On the main screen, click the **Network** button, select **WebCam Server**, and click the **Server** tab. The Server Setup dialog box appears (see Figure 6-2).
2. Click **Detect UPnP**. This dialog box appears.

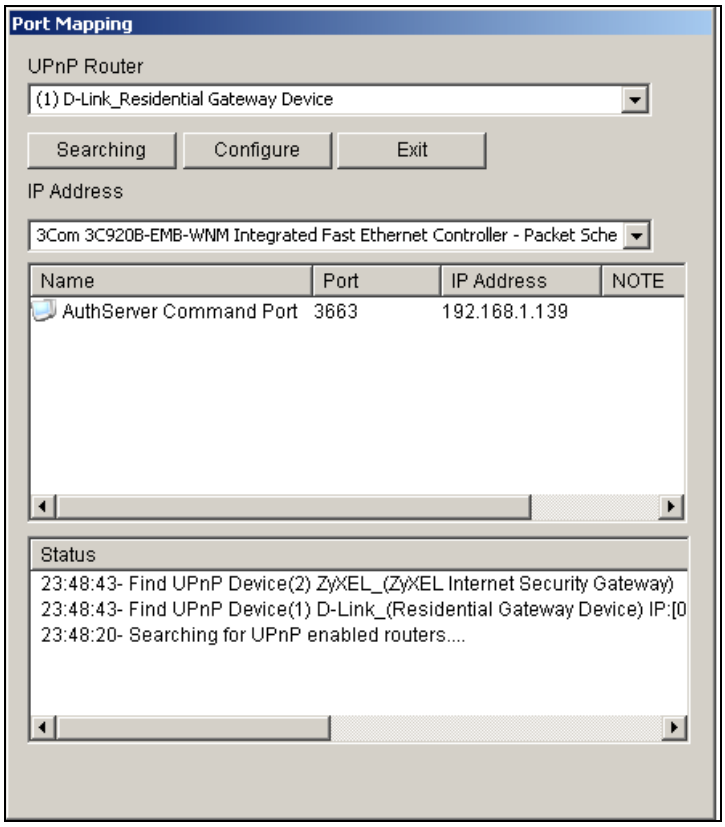


Figure 6-12

3. Click **Searching** to search the UPnP-enabled routers.
4. If your server is installed with more than one router, select a desired one from the UPnP Router drop-down list.
5. If you server is installed with more than one network adapter, select a desired one from the IP Address drop-down list.
6. Click **Configure** to automatically configure the communication ports on the router.

Tip: If you don't use the default ports, modify the related ports in the Server Setup dialog box (See Figure 6-2) and then click **OK**. Re-open the dialog box and follow above steps to configure your router.

Note: UPnP technology now is also available in other remote applications: Control Center, Center V2, Remote Playback, Authentication Server, VSM and TwinDVR.

FTP Server Settings

The option of FTP transfer JPEG file allows you to access the recording files in a folder tree at a client computer installed with the FTP server. In Figure 6-6, select the **FTP transfer JPEG file** option, and then click the **FTP Setup** button to display the following dialog box.

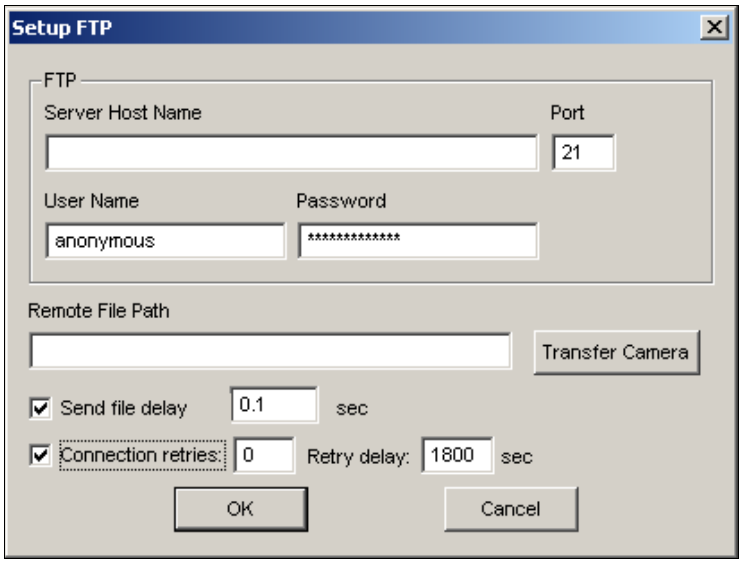


Figure 6-13 *FTP Setup*

1. In the Server Host Name field, enter the IP address or domain name of the FTP server. Keep the port setting as default at 21.
2. Enter a valid user name and password to access the FTP server.
3. Specify a file path to save the recording files on the FTP server.
4. Click the **Transfer Camera** button and assign which camera's files to be transferred to the FTP server.
5. In the Send File Delay field, specify the time of updating JPEG files from the GV-System to the FTP server. The time range is from 0.1 to 10 sec.
6. In the Connection Retries field, specify the number of retries when the FTP connection fails (Max：999). In the Retry Delay field, specify the interval between each retries (Max：9999 sec.).
7. Click **OK** to apply above settings.

Starting WebCam at the Client PC

Once the WebCam server at the GV-System is enabled, it is then possible to view images using a web browser at a client PC or from a remote site. Microsoft Internet Explorer will be used as the browser through the entire chapter.

1. To start the connection, open an IE browser.

2. Type the IP address or the domain name of the GV-System to display the following window.

Figure 6-14 *WebCam Compression Selection*

- **MPEG4 Encoder Viewer:** Provides the most complete functionality of the WebCam applications, allowing you to view up to sixteen cameras from different GV-Systems.
- **JPEG Image Viewer:** Provides least features but is suitable for the users with limited bandwidth, for example, users viewing with Apple Mac, and operating systems using Netscape Navigator.
- **Remote Play Back:** Downloads history files from the GV-System onto the client PC.
- **Emap:** Accesses the Emap files.
- **Remote Control:** Accesses the GV-System settings.

3. For the purpose of this demo, select MPEG 4 Encoder, and then click the **Submit** button to display the following window.

Figure 6-15 *Select Internet Connection*

1. Select the type of Internet Connection you're using. Modem users are limited to Single Window, while broadband users have the option of 2 Windows or Multi View. For this demo, select **Single Window**, and then click the **Submit** button.
2. Your IE browser starts loading the MPEG4 Encoder interface. When the loading is completed, click the **Play** button and type a valid user ID and password.

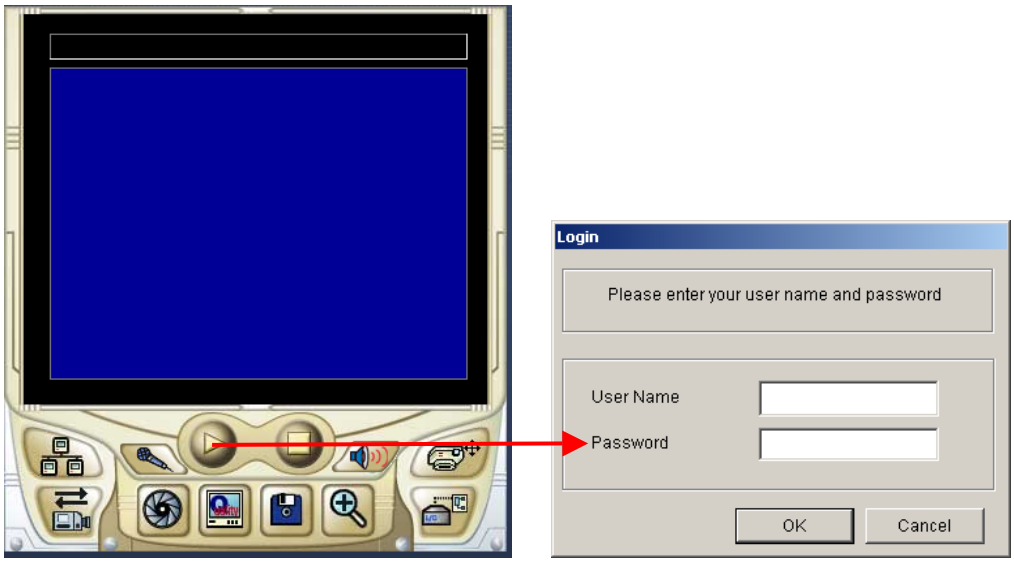


Figure 6-16 *Entering a valid ID and password*

3. If the **Enhance network security** option was selected in WebCam Options (see Figure 6-1), you will be prompted to enter a security code. In this example, enter ***4qhtfa*****,** and then click **OK**.
4. If the connection is established, you will see video streaming in the MPEG4 Encoder Viewer.

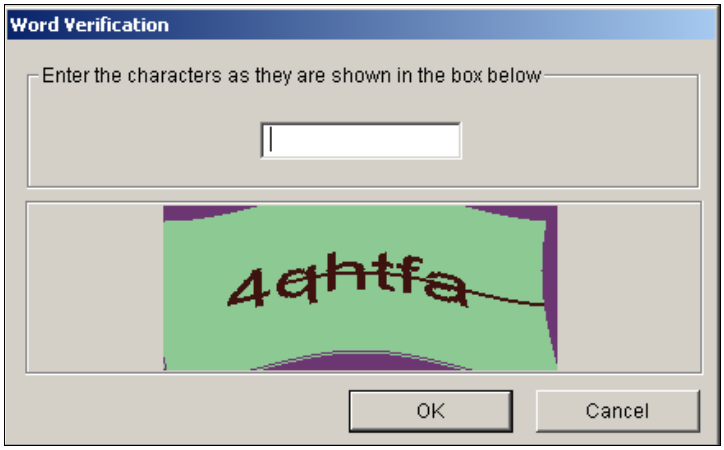


Figure 6-17 *Enter a security code*

Single View MPEG 4 Encoder Viewer

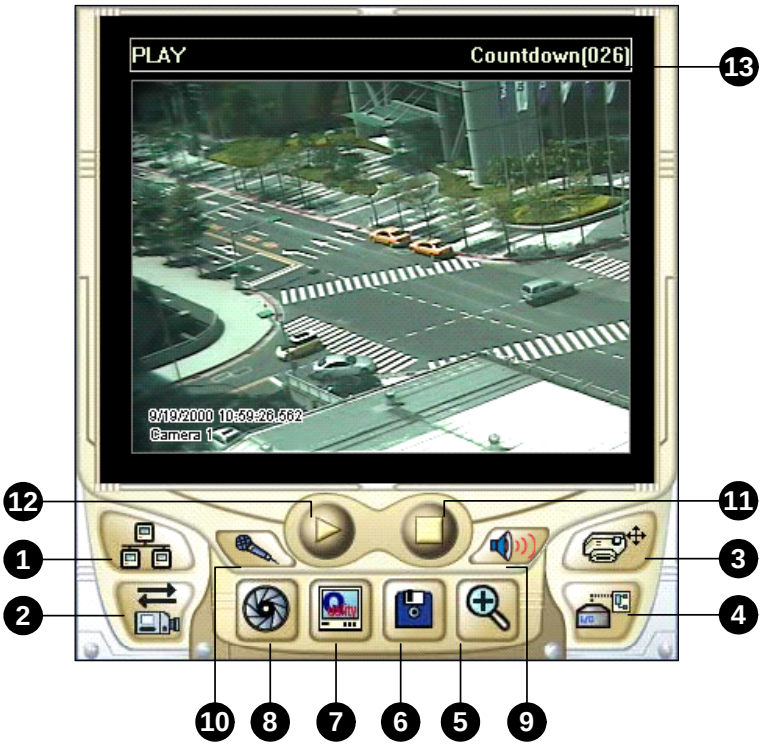


Figure 6-18 *Single View MPEG4 Encoder Viewer*

The controls in the Single View Viewer:

No	Name	Description
1	Change Server	Brings up these options: Alarm Notify, Data Rate Configure, Remote Config, Change Server, Show Camera Name and Enable DirectDraw.
2	Change Camera	Selects the desired camera for display.
3	PTZ Control	Displays the PTZ control panel.
4	I/O Control	Displays the I/O control panel.
5	Full Screen	Switches to full screen view.
6	File Save	Saves live video in the local computer.
7	Change Quality	Adjusts video quality in 4 levels.
8	Snapshot	Takes a snapshot of the displayed live video.
9	Speaker	Enables live audio from the remote GV-System.
10	Microphone	Enables speaking to the remote GV-System.
11	Stop	Terminates the connection to the remote GV-System.
12	Play	Connects to the remote GV-System.
13	Countdown Timer	Indicates the remaining time when you log in as Guest. When the time is up, you will be logged out automatically.

Administrating Host Server

This option allows you to add, edit, and remove a GV Server from the Host drop-down list. The drop-down list is used to switch the connection to a different GV Server listed inside. Click the **Change Server** button (No.1, Figure 6-18) to display the following dialog box.

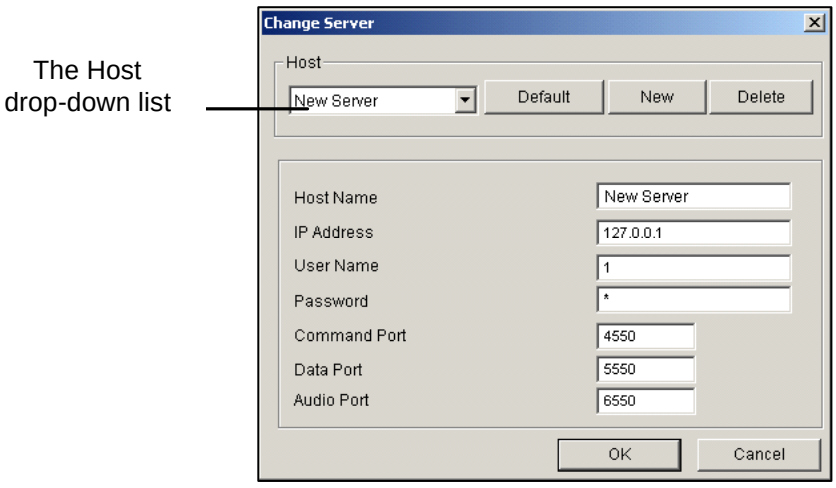


Figure 6-19 *Change Server*

[Adding Host Server] To add a host server to the drop-down list, click the **New** button. In Host Name field, type a name to identify the designated GV Server. Type the IP address or domain name of the GV- Server. Type a valid user name and password with privilege to use this function. Leave all port settings as defaults at 4550, 5550, and 6550 respectively unless otherwise necessary. Click the **OK** button. Then the created GV Server will appear in the drop-down list.

[Editing Host Server] Select the GV Server you wish to edit from the Host drop-down list. All information of the selected server will be displayed. Change the information in the fields as required and click the **OK** button. Then the information is updated and connection is switched to the edited GV Server.

[Removing Host Server] Select the GV Server you wish to remove from the Host drop-down list, and then click the **Delete** button to remove it.

Taking a Snapshot from a Live Video

Click the **Snapshot** button (No. 8, Figure 6-18) to display the following Snapshot window. Click the **Print** button to print out the displayed image. Or click the **Save** button to save this image in a client PC.

Figure 6-20 *Take a Snapshot*

Pop-up Setup

The Single View MPEG4 Encoder Viewer can be set to pop up as soon as motion is detected or I/O devices are triggered. To enable the function, follow the steps below.

1. Click the **Change Server** button (No. 1, Figure 6-18), and then select **Alarm Notify** to display the following dialog box.

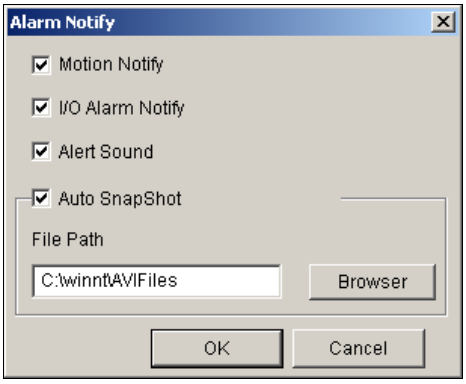


Figure 6-21 *Alarm Notification*

- **Motion Notify:** The Viewer will pop up as soon as motion is detected.
- **I/O Alarm Notify:** The Viewer will pop up as soon as I/O devices are triggered.
- **Alert Sound:** Enable the computer noise alarm on motion and alarm activation.
- **Auto Snapshot:** The program will take a snapshot every 5 seconds on motion and alarm activation.
- **File Path:** Assign a path to save the snapshots.

2. Click **OK** to apply the above settings.
3. Minimize your IE browser to test the pop-up function.

Exporting Video

Click the **File Save** button (No. 6, Figure 6-18) to save video in a client PC. Files saved in AVI format are playable at third party viewers.

PTZ Control

Click the **Camera Select** button to select one PTZ camera, and then click the **PTZ Control** button (No. 3, Figure 6-18) to bring up the PTZ control panel.

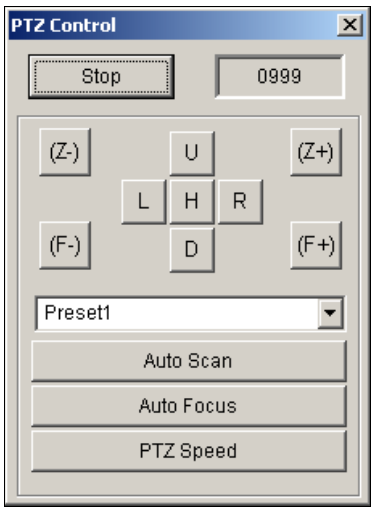


Figure 6-22 *PTZ control panel*

One PTZ camera only allows one user to control at a time. If several users are trying to control the same PTZ camera at the same time, the Single View viewer will give the priority to the first login user and then to the next user in queue. Each user will be given 60 seconds to control the PTZ camera. The Timer at the upper right corner informs the user of the remaining time of control or the total waiting time.

The supervisor is given the highest priority to control the PTZ camera and won't be restrained by 60-second time limit. When the supervisor logs in WebCam, the Timer shows 999.

The **PTZ Speed** button in the lower part allows you to configure the speed of a PTZ camera up to five levels.

I/O Control

The new interface provides real-time graphic displays of camera and I/O status, and alarm event. Additionally, you can force output, as well as enable and disable I/O devices to the remote GV-System. Click on the **I/O Control** button (No. 4, Figure 6-18) to bring out the I/O control panel.

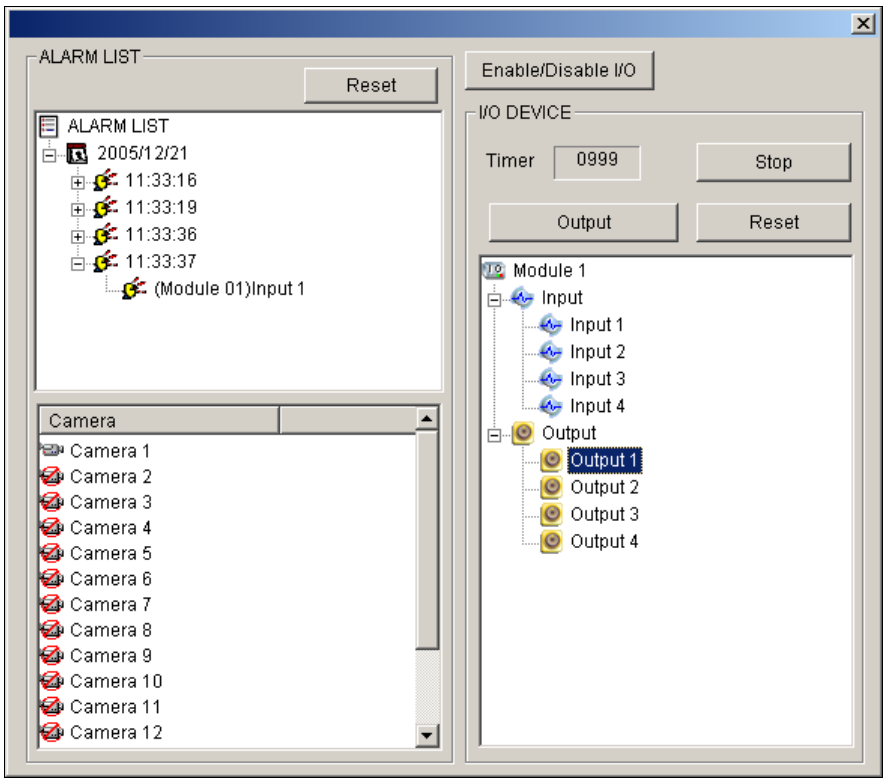


Figure 6-23 *I/O Control*

The alarm status is displayed in three levels. The first level indicates date, second indicates time, and the third indicates alarm ID. Clicking the **Reset** button will clear the alarm list.

To initiate an output device, click the **Enable** button, highlight an output and then click the **Output** button. The Timer functions the same as in the PTZ control panel. Each user will be given 60 seconds of control time while the supervisor has 999 seconds. Clicking the **Stop** button will stop the operation and turn over the control privilege to the next user waiting online.

If you want to enable or disable I/O devices to the remote GV-System, click the **Enable/Disable I/O** button. For this, the remote GV-System must grant the privilege first. Enable the **Enable Remote Control** option in Figure 6-1.

Two-Way Audio

To make two-way audio possible, both hardware and software must be properly set up and installed. For the instructions on setup and installation, refer to *Audio Settings* in this chapter. Click the **Speaker** button (No. 9, Figure 6-18) to access live audio from the server site, and click the **Microphone** button (No. 10, Figure 6-18) to speak to the server site. When both buttons are enabled, you can perform two-way communication between the client computer and the server site.

Data Rate Configuration

When sounds seem to pause or break up, you can configure Data Rate to improve the situation. Click the **Change Server** button (No. 1, Figure 6-18) and select **Data Rate Configure** to display the following window. Moving the slide bar to the Low direction will decrease the frame rate but increase the audio performance; moving the slide bar to the High direction will increase the frame rate but decrease the audio performance.

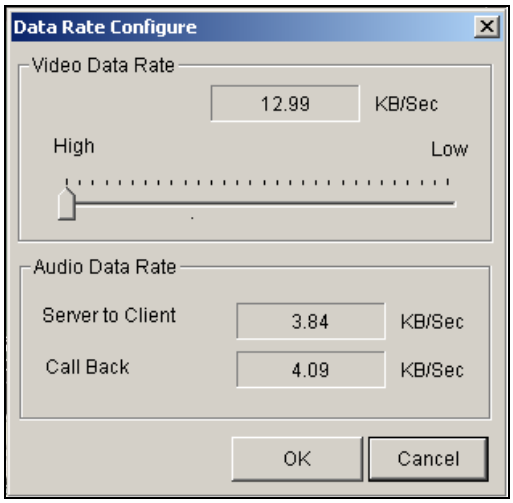


Figure 6-24 *Data Rate Configuration*

DirectDraw Setup

The DirectDraw setting is enabled by default. Some VGA cards might not support DirectDraw and can produce distorted frames. In this case, disable the function from the **Change Server** button (No. 1, Figure 6-18).

Remote Configuration

Remote Configuration allows you to adjust video images, start/stop recording, enable/disable I/O monitoring and activate/deactivate schedules to the remote GV-System. For this, the remote GV-System must grant the privilege first. See the **Enable Remote Control** option in Figure 6-1.

Click the **Change Server** button (No. 1, Figure 6-18) and select **Remote Config** to display the following dialog box.

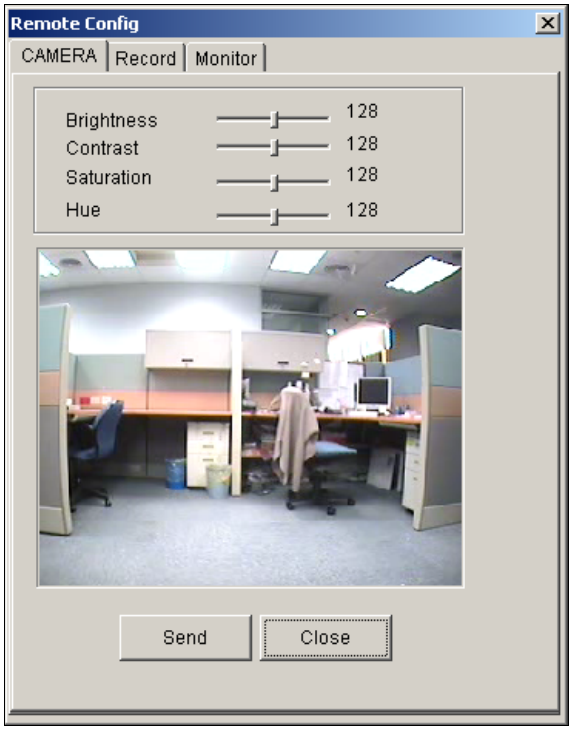


Figure 6-25 *Remote Config Dialog Box*

[Camera] Move the slide bars (Brightness, Contrast, Saturation and Hue) to adjust video attributes. Click the **Send** button to apply the changes to the remote GV-System.

[Record] Check the desired cameras to start or stop recording to the remote GV-System.

[Monitor] Enable I/O and Schedule monitoring to the remote GV-System. Click the **Send** button to apply the settings.

Multi View MPEG 4 Encoder Viewer

Multi View is a multi-channel MPEG4 Encoder Viewer, allowing users to view 4, 8, and 16 live cameras simultaneously. Because multiple channels require a large amount of data to be transferred over Internet, this function is limited to broadband users only.

To start Multi View, follow these steps:

1. Follow the instructions of *Starting WebCam at the Client PC* in this chapter until the Select Internet Connection window appears.
2. Select **DSL/CABLE/T-1**, choose **Multi View**, and then click the **Submit** button. First time users will be prompted to install the Multi View applications. Select **Yes**, and then follow the instructions to complete the installation.

3. When the Login dialog box appears, enter a valid user ID and password, and then click **OK**. This displays the following Multi View window.

Figure 6-26 *The Multi View Window*

The controls in the Multi View:

No	Name	Description
1	Monitoring Window	Displays live video.
2	Host Server	Displays connected GV-Systems and their available cameras.
3	UPnP Device	Displays all hosts on the same LAN.
4	PTZ Control	Displays the PTZ control panel.
5	I/O Control	Displays the I/O control panel.
6	Channel Status	Indicates the general information of the selected channel.
7	Configure	Accesses system settings of the Multi View.
8	Edit Host	Adds, deletes or modifies GV-Systems.
9	Camera Status	Displays the camera status of the connected GV-Systems.
10	Host Information	Displays the general information of the connected GV-Systems.
11	Zoom in and out	Zooms in or out the selected channel.

12	Add/Remove Channel	Adds or deletes the channels for video polling. Click the **Add or Remove Channel** button and then click the desired channel to add to or remove from the video polling.
13	Full Screen	Switches to a full screen view.
14	Video Polling	Rotates through the selected channels.
15	Screen Divisions	Sets screen divisions to 4, 8 or 16.
16	Exit/Minimize	Closes or minimizes the Multi View window.
17	Speaker	Enables speaking to a remote GV-System.
18	Microphone	Enables live audio from a remote GV-System.
19	Stop	Terminates the connection to a GV-System.
20	Play	Establishes the connection to a GV-System.
21	Save	Saves live video.
22	Quality	Changes video resolution.
23	Snapshot	Takes a snapshot of the selected channel.
24	Save Camera to Multiple Host	Saves the selected cameras and to create a Multiple Host.

Working With the Host Server Window

The Host Server window displays a list of available GV Servers. The server icons indicate available servers and the camera icons indicate all cameras included in the selected server. To connect to a server site:

1. Click a monitoring window, which will be highlighted in red frame.
2. Double-click on a camera icon, and then its corresponding video will be loaded to the selected monitoring window.

First time users will only see one server icon as no additional servers are created yet. For the details of adding new servers to the Host Server window, refer to *Creating a Quick Connection to a Host Server,* later in this chapter.

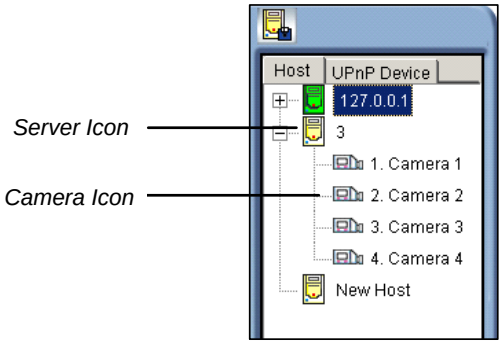


Figure 6-27 *The Host Server Window*

Working with Hosts on the Same LAN

With UPnP technology, MutliView can detect all hosts on the same LAN, without the need of user configuration.

1. On the Host window, click the **UPnP Device** tab for detection. The blue icon means WebCam Server is activated at the host while the white icon means WebCam Server is not enabled
2. Double-click one host for connection. A valid ID and password are required.

Note: For UPnP detection, the host needs to open TCP port 5201 and the MultiView site needs to open UDP port 5200.

Exporting Video

You can save live videos in a client computer. The files in AVI format are playable at the third party viewer. Click the **Save** button, and then select all or several cameras to start recording. For the folder path, see Figure 6-31.

Taking a Snapshot from a Live Video

Click a desired channel, and then click the **Snapshot** button to take a snapshot of live video.

PTZ Control

1. Select a PTZ capable camera from the monitoring window, or double-click it on the Host Server window.
2. Click the **PTZ Control** button (No. 4, Figure 6-26).
3. Turn the switch to the **ON** position.
4. Use the directional, zoom-in, zoom-out, focus-in, focus-out buttons to control the PTZ camera.

The Timer has the same functions as the one in the Single View MPEG4 Encoder Viewer. The supervisor is given the highest priority to control PTZ in Multi View and won't be restrained by 60-second time limit. When the supervisor logs in Multi View, the Timer will show 999.

The **Option** button lets you direct the PTZ camera to a preset position and configure the speed of the PTZ camera up to five levels.

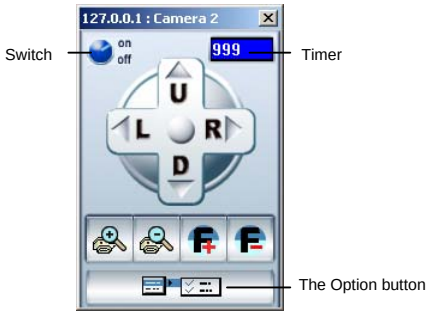


Figure 6-28 *PTZ control panel*

Output Control

1. Click the **I/O Control** button (No. 5, Figure 6-26).
2. Turn the switch to ON position,
3. Select a module from the drop-down list. Each module provides 4 to 16 connected relay output devices.
4. Click the **Output (x)** button to enable the output device.

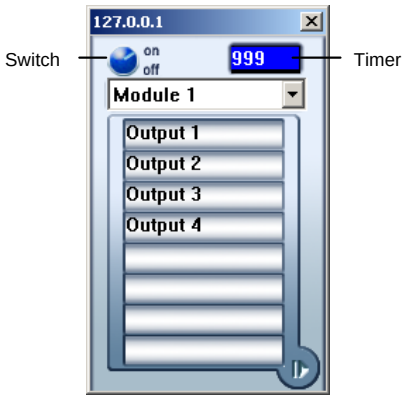


Figure 6-29 *I/O Control Panel*

Channel Status Information

When choosing a camera from the Host Server window or the monitoring window, the general information of the selected camera will be displayed in the Channel Status Window as shown below.

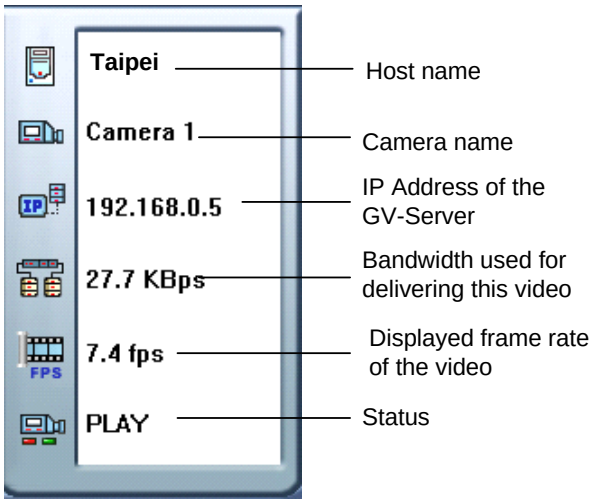


Figure 6-30 *The Channel Status window*

Camera Polling Function

To add cameras to the polling group:

1. Click the **Add Channel** button, and then click the monitoring windows. The selected windows will be framed in red color.
2. Click the **Video Polling** button. The application will rotate the selected cameras in the specified time. To configure the polling time, see Figure 6-31.

To remove one camera from the polling group, click the **Remove Channel** button, and then click its monitoring window.

Two-Way Audio

The two-way audio in Multi View functions similarly to the one in Single View MPEG4 Encoder Viewer. See T*wo-Way Audio* earlier in this chapter for further details.

Multi View Configuration

Click the **Configure** button (No. 7, Figure 6-26) to display the following window.

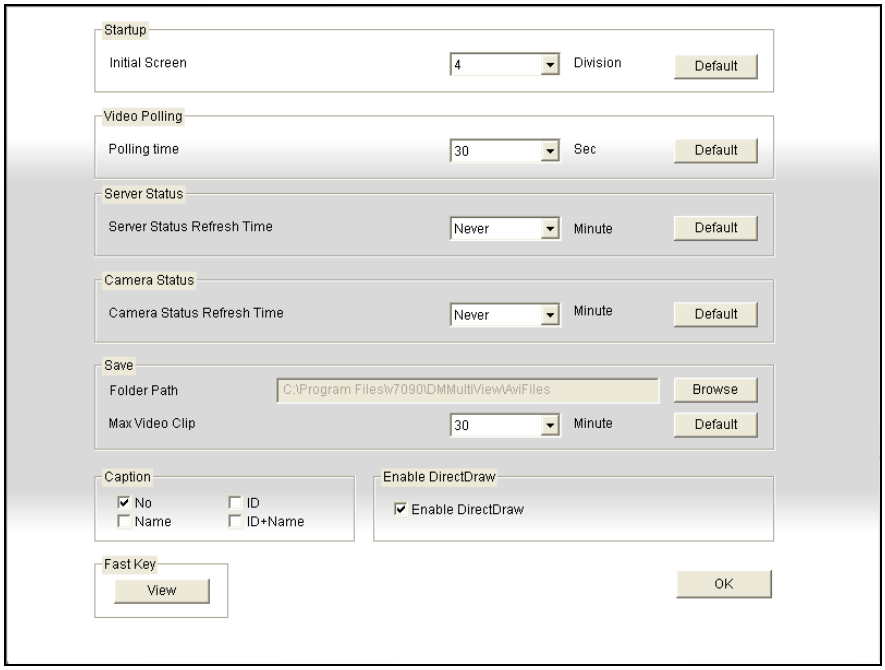


Figure 6-31 *The Configure Window*

- **Initial Screen:** Select screen divisions at startup.
- **Polling Time:** Specify the camera polling time from 1 to 60 seconds.
- **Server Status Refresh Time:** Specify the refresh time to update the host information.
- **Camera Status Refresh Time:** Specify the refresh time to update the camera information.
- **Folder Path:** Specify a path to save recorded files.
- **Max Video Clip:** Specify the maximum time length of each recorded file to be 30 or 60 minutes. The default time length is 30 minutes.
- **Caption:** Select what kind of caption to display on the monitoring window.
  ID: camera ID; **Name:** camera name; **No:** no display.
- **Enable DirectDraw:** The DirectDraw is enabled by default. Some VGA cards might not support DirectDraw and can produce distorted frames. In this case, disable this function.
- **Fast Key:** Click the **View** button to display the fast key table of the Multi View. Refer to *Fast Key Reference* later in this chapter.

Creating a Quick Connection to a Host Server

To create a quick connection to a new host server, click the **Edit Host** button (No. 8, Figure 6-26). This displays the following window.

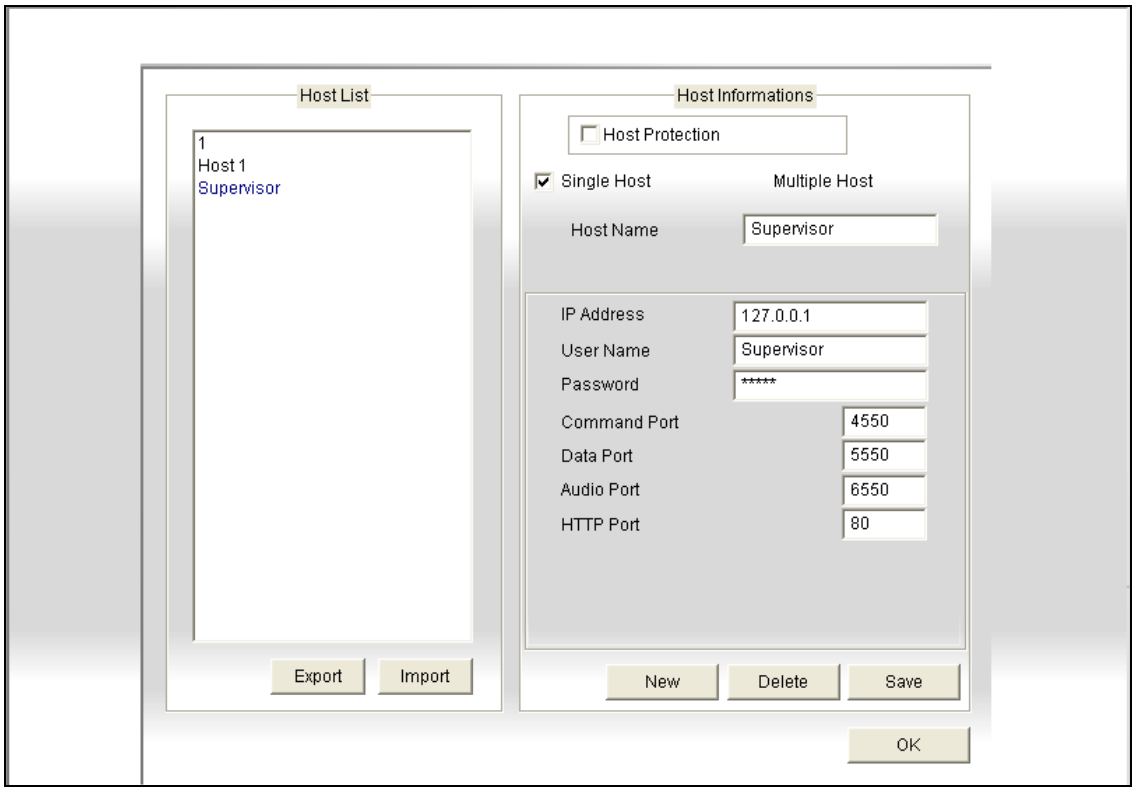


Figure 6-32 *The Edit Host Window*

[Host List] When a host server is created, it will appear in the Host List section at the left side. Each server can be identified by its given host name. Clicking on the host name and its information will be displayed in the Host Information section.

[Adding Host Server] Click the **New** button and all fields in the window will be cleared. In the Host Name field, type a name to identify the designated GV Server. Type the IP address or domain name of the GV Server. Type a valid user name and passwords with privilege to use this function. Leave all port configuration as defaults at 4550, 5550, 6550, and 80 respectively unless otherwise necessary. Click the **Save** button, and then the GV Server will appear in the Host List section with the given ID name.

[Editing Host Server] Select the GV Server you wish to edit in the Host List section. All information of the selected server will be displayed in the Host Information section. Change the information as required and click the **Save** button.

[Removing Host Server] Select the GV Server you wish to remove from the Host List section, and click the **Delete** button.

Creating a Multiple Host

You can create a multiple host including the camera channels all from different IP addresses. There are two methods to create a multiple host: the manual creation of a multiple host; the quick creation of a multiple host.

Manual Creation of a Multiple Host

1. Click the **Edit Host** button (No. 8, Figure 6-26) to display the Edit Host window (Figure 6-32), and then click the **New** button to create a new host.
2. Check **Multiple Hosts** to display the following window.

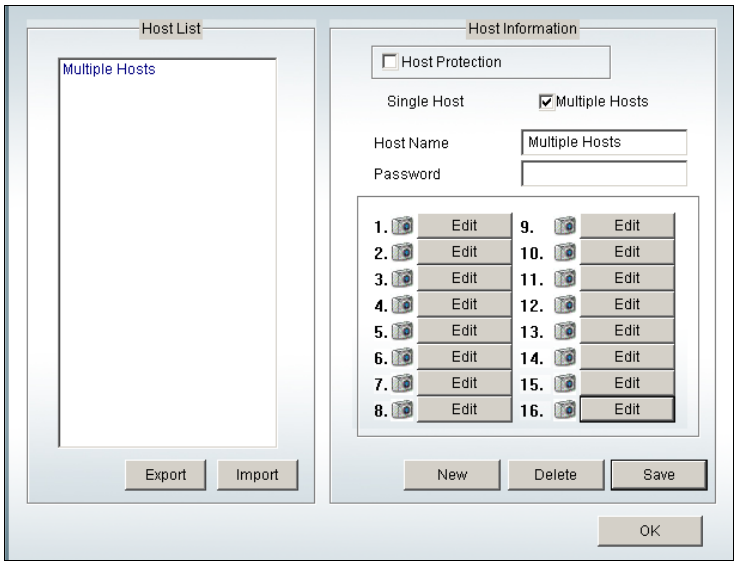


Figure 6-33 *Creating a multiple host*

3. In the Host Name field, enter a desired name to identify the multiple host.
4. To set up each camera channel of the multiple host, click the **Edit** tab one at a time.
5. Alternatively, you can click and drag the created camera channel from the Host Server window (Figure 6-27) to each **Edit** tab.
6. When you click the **Edit** tab, you will see the following window.

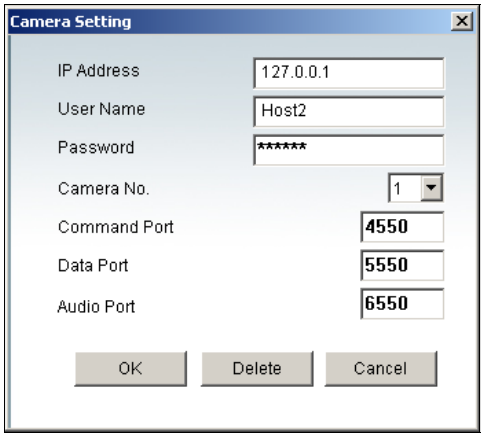


Figure 6-34 *Camera Setting*

7. Enter the IP address, user name and password of a remote host.
8. In the Camera No. drop-down list, select one desired camera channel from the remote host.
9. Let the port settings match those of the remote host, or keep them as defaults
10. Click **OK**.

The icon of the created multiple host in the Host Server window is yellow, while others are blue.

Quick Creation of a Multiple Host

1. Click on a desired monitoring window, which will be highlighted in the red frame.
2. Click and drag a camera from the Host Server window. The selected camera then displays in the highlighted monitoring window.
3. Repeat the step 1 and 2 to configure other monitoring windows for different cameras.
4. Click the **Save Camera to Multiple Host** button (No. 24, Figure 6-26) to create the multiple host. .

Camera Status

To show the camera status of the selected GV Server, click the **Camera Status** button to display the following window. "Camera ON" indicates the camera is active. "No Privilege" means you're not authorized to view this camera. Clicking the **View** button will bring up a small window displaying the selected camera's video. Clicking the **Refresh** button will refresh the information in this window.

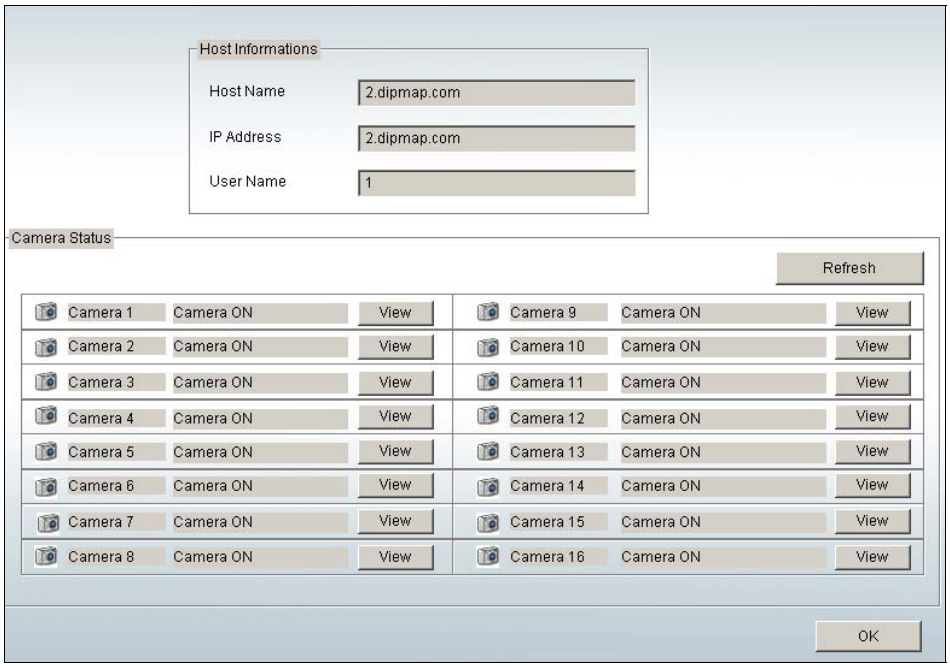


Figure 6-35 *The Camera Status Window*

Host Information

Click the **Host Information** button (No.10, Figure 6-26) to display the following window. The Host Information window contains the following three categories. Use the control tabs to toggle among them.

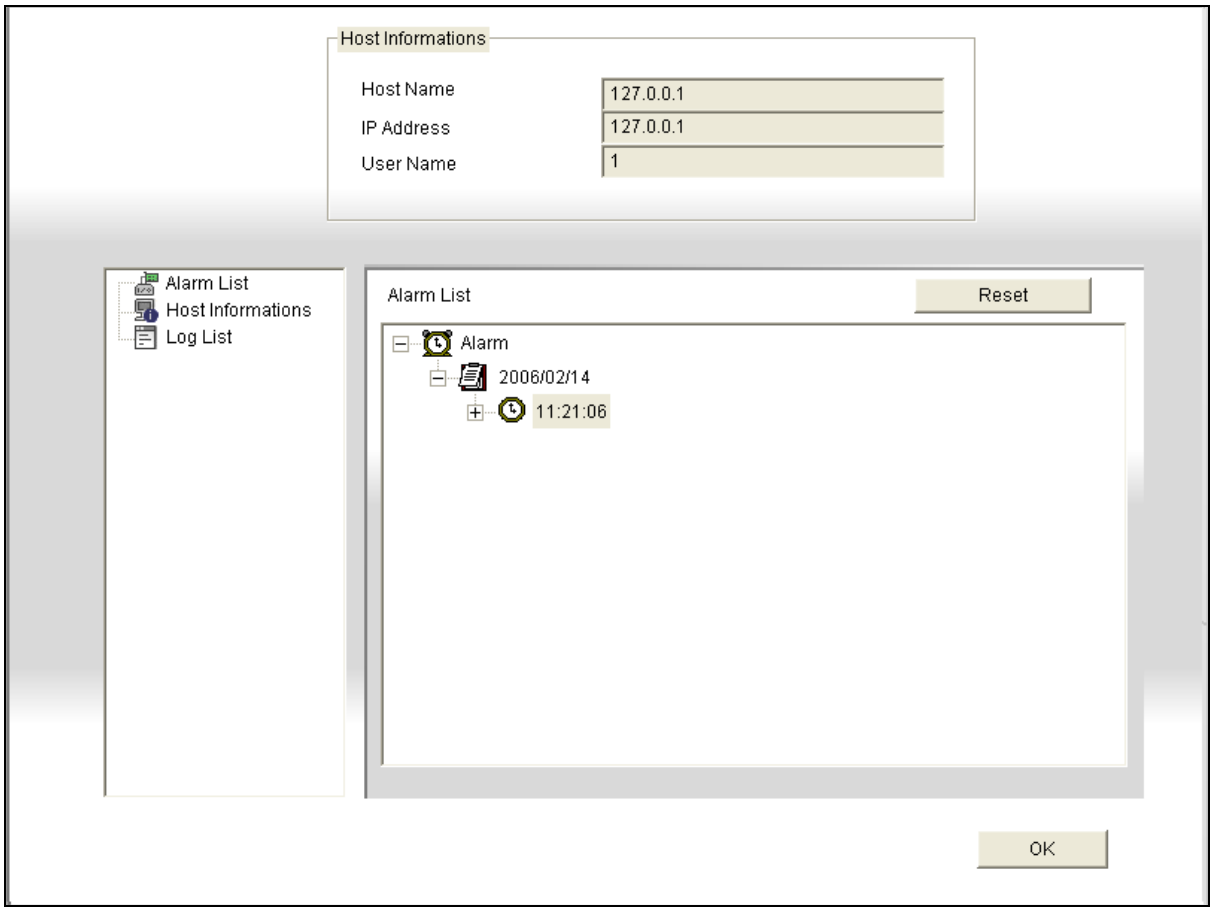


Figure 6-36 *The Host Information Window*

[Alarm List] Displays a list of alarm events occurred in the selected **GV Server**. Clicking the **Reset** button will clear the listed events. New events will be generated until the alarms of the local site are invoked.

[Host Information] The upper section shows the general information of the connected GV Server. The lower section shows the number of MPEG4, RPB, and audio channels currently serving over the Internet.

[Log List] Displays a history of login and logout information.

JPEG Image Viewer

JPEG Image Viewer is a cross-platform viewer, practicable on Mac OS, Netscape, and Microsoft IE browsers. Continuously receiving JPEG images from GV-System and limited to the single camera view, the viewer is an ideal tool for the users with limited Internet bandwidth. For this application, the **Create JPEG/GIF File(s)** option must be enabled (see Figure 6-6), while the **Enhance Network Security** option must be disabled (see Figure 6-1).

To start the JPEG Image Viewer, follow these steps:

1. Open an Internet browser from a client PC.
2. Enter the IP address or domain name of the GV-System to display the WebCam Compression Selection window (see Figure 6-14).
3. Select **JPEG Image Viewer**, and then click **Submit**. A valid ID and password are required.
5. The JPEG Image Viewer window appears.

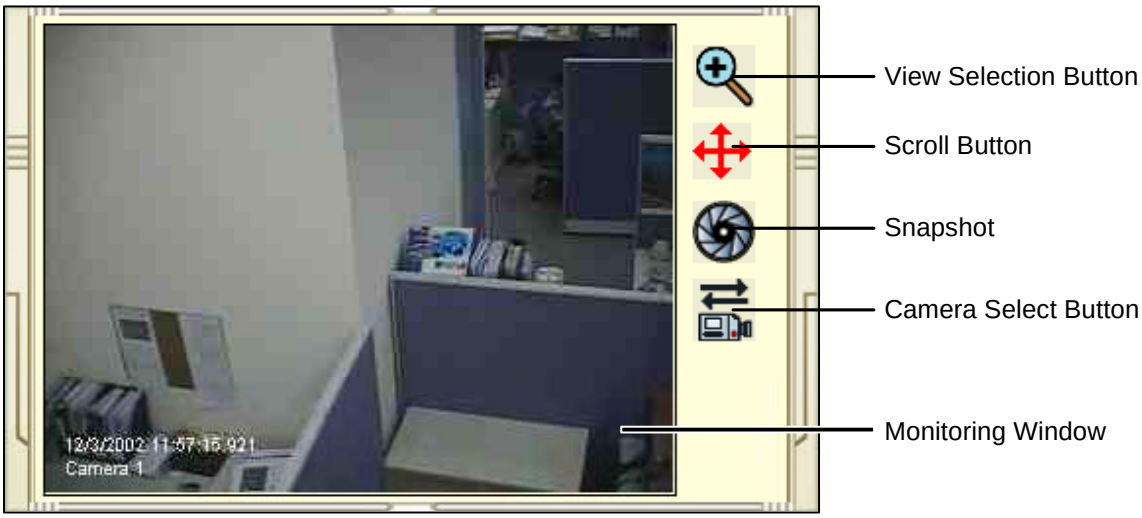


Figure 6-37 *JPGE Image Viewer*

Remote Playback on WebCam

The WebCam Remote Playback (RPB) is a web-based application, allowing you to play back recorded video or audio files of the connected GV-System.

To start WebCam RPB:

1. Follow the steps in *Starting WebCam at the Client PC* earlier in this chapter until the WebCam Compression Selection window appears (see Figure 6-14).
2. Select **Remote Playback**, and then click the **Submit** button to display the following RPB window.
3. Click the **Play** button to log in the application. A valid ID and password are required here.

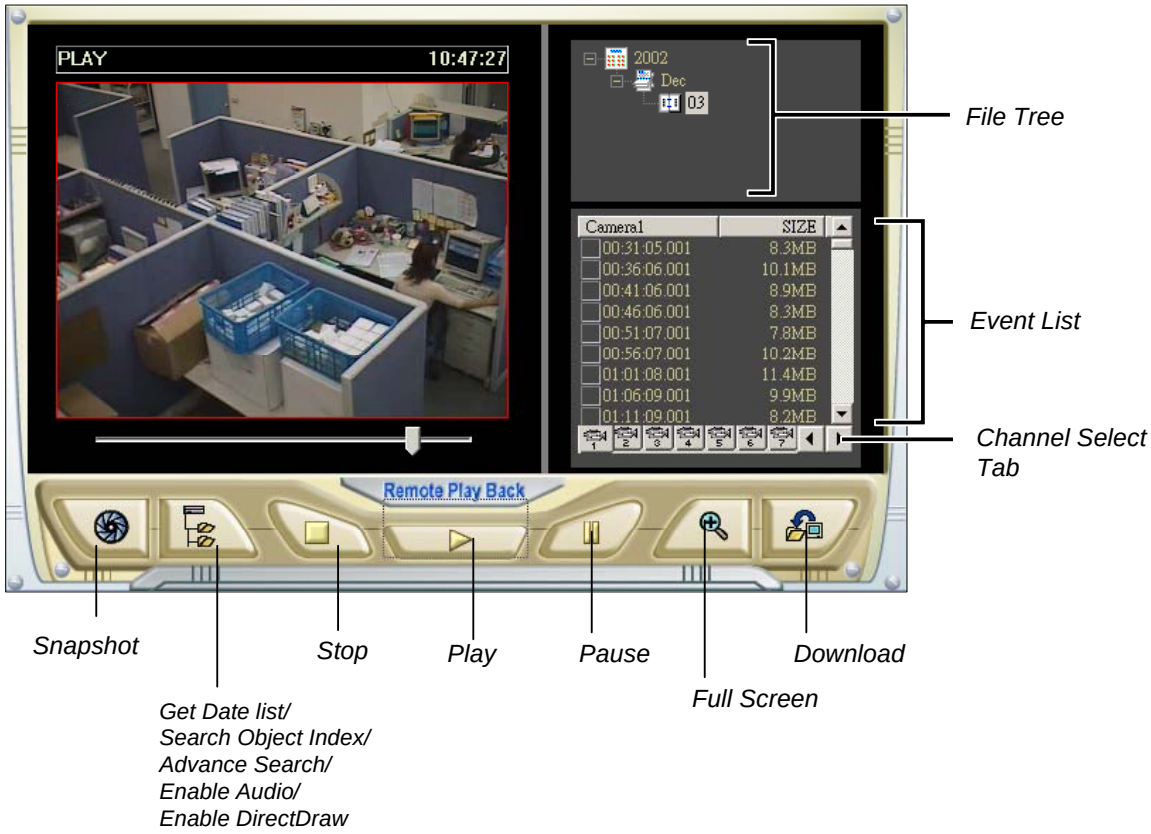


Figure 6-38 *The Remote Playback Window*

Searching and Playing Back Recorded Files

The WebCam RPB allows you to play back video and audio files. Audio files are only available when your system is equipped with the optional audio recording function.

1. Click the **Get Data List** button and then select **Get Date List**. This loads the recorded data from the **GV-System**.
2. Select a date in the File Tree.
3. All video files recorded within the selected date range will be listed in the following Event List window.

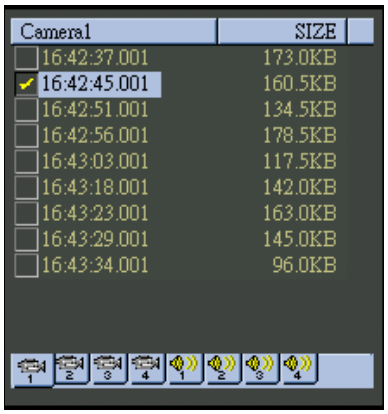


Figure 6-39 *Event List*

4. Select one camera or audio channel from the **Channel Select** tabs.
5. Select one video file from the Event List, and then click the **Play** button to play it.

Synchronizing Audio with Video Playback

To synchronize audio with video playback, click the **Get Data List** button and then select **Enable Audio**.

DirectDraw Setup

The DirectDraw setting is enabled by default. Some VGA cards might not support DirectDraw and can produce distorted frames. In this case, disable the function from the Get Data List button.

Searching Object Index

You can locate and play back the Object Index files through the WebCam RPB. For the details of Object Index, see *Retrieving Images Using Object Index* in Chapter 1.

1. Click the **Get Data List** button, and then select **Search Object Index**. This window appears.

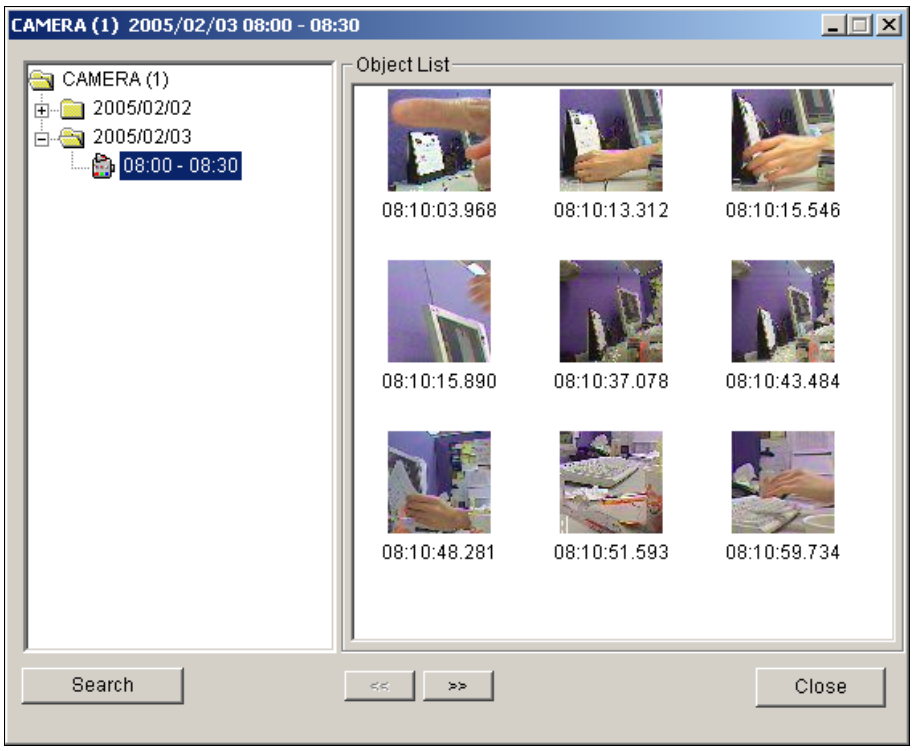


Figure 6-40 *The Search Object Index Window*

2. Click the **Search** button. The Search window appears.
3. Select the desired cameras, and then click **Search**. The found files will display in the left side of the Search Object Index window.
4. Expand the files to access the thumbnail view.
5. Double-click one displayed image. The related video will play on the RPB.

Advanced Search

The advanced search function in the WebCam RPB lets you easily locate an event by search criteria. The search results can be displayed in a text form and/or a statistic chart. Click the **Get Data List** button, and select **Advance Search** to open the following advanced search window.

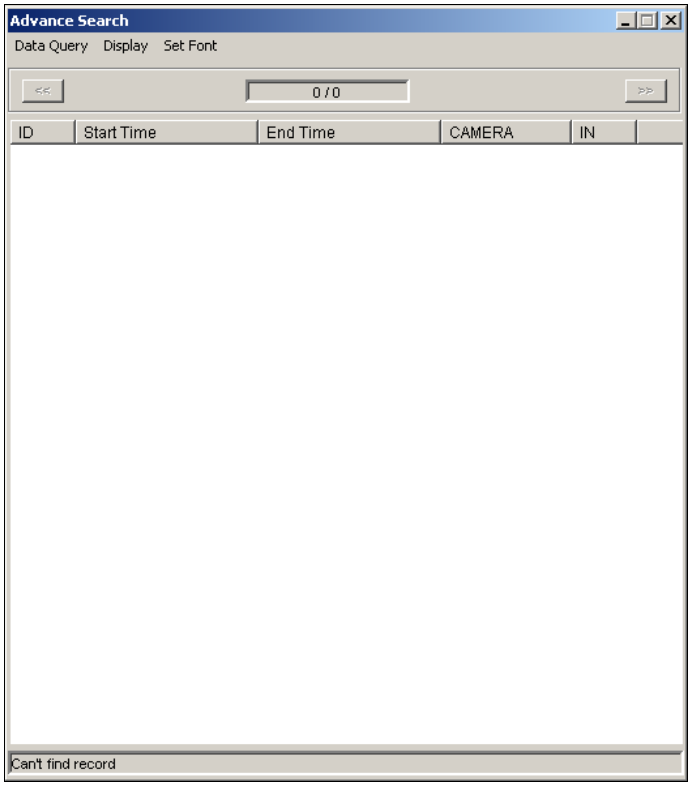


Figure 6-41 *Advanced Search*

[Display] This option on the menu bar lets you choose which way to display search results: a text form or a statistic chart.

[Data Query] To locate an event, click **Data Query** on the menu bar. The selections included inside are: (1) Monitor, (2) System, (3) Login, (4) Counter and (5) POS. The five categories are based on those of System Log in the Main System (see *System Log* in Chapter 1), so that you can locate any event type recorded in System Log.

- **Monitor/System/Login/Counter:** The four selections let you locate an event about monitoring, system, login/logout and counter status. The dialog boxes of the four selections are similar, so we take Monitor as an example below.

  Click **Data Query** on the menu bar, and select **Monitor** to display the following window. Define your search condition in each field, and click **OK** to start searching.

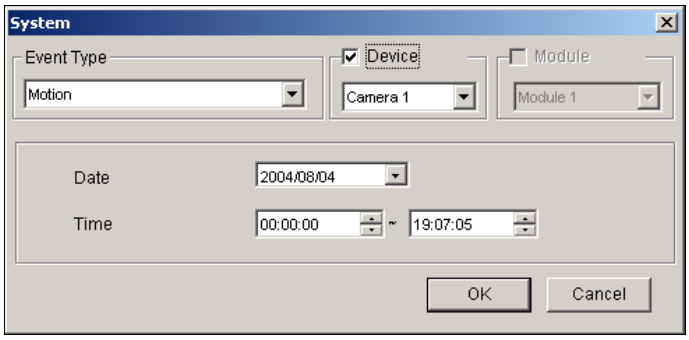


Figure 6-42 *Locating a system event*

- **POS:** The selection lets you locate a desired POS transaction event. Click **Data Query** on the menu bar and select POS to display the following window.

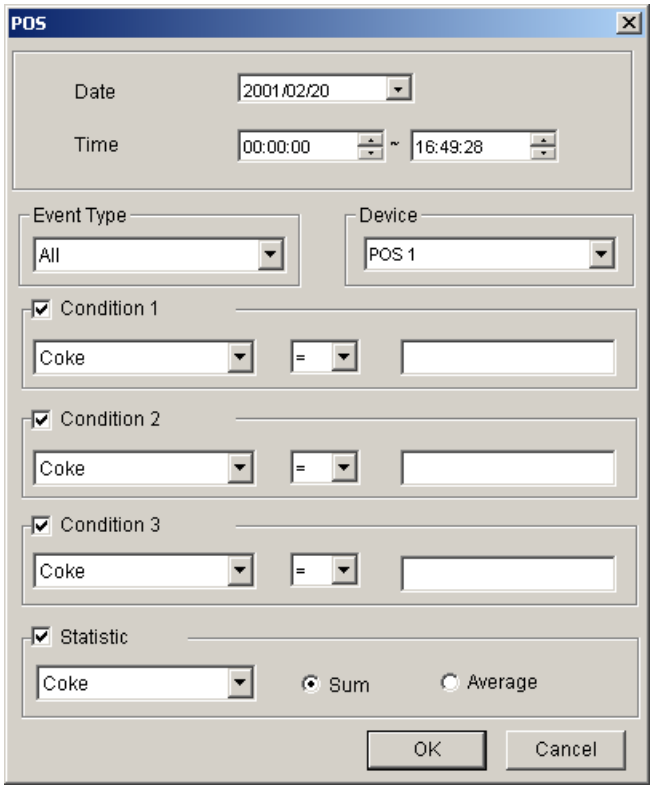


Figure 6-43 *Locating a POS event*

Restrict your search to a certain date, time, event type, POS system, transaction item (content), and price amount (value). Then click **OK** to start searching. For this example, we like to search all the transaction types related to Coke, registered in the device POS 4, from 00:00:00 to 13:43:19 on 2004/07/13. Its price amount may be *greater than or equal to* (>=) 1 and *less than or equal to* (<=) 99.

If we select the **Statistic** option and click **OK** here, we will get the sum or the average price of all the discovered transaction events, not a list of these events.

Remote Control Using Remote Desktop

The WebCam Remote Control function is based on Microsoft's Remote Desktop platform. To start this feature, your GV-System must be run on Windows XP Professional with Microsoft Remote Desktop properly set up. The client PC can be Windows XP, Windows 2000, or Windows Server 2003.

To use the Remote Control:

1. Follow the steps in *Starting WebCam at the Client PC* earlier in this chapter until the WebCam Compression Selection window appears. See Figure 6-14.
2. Select **Remote Control**, and then click the **Submit** button. This screen appears.

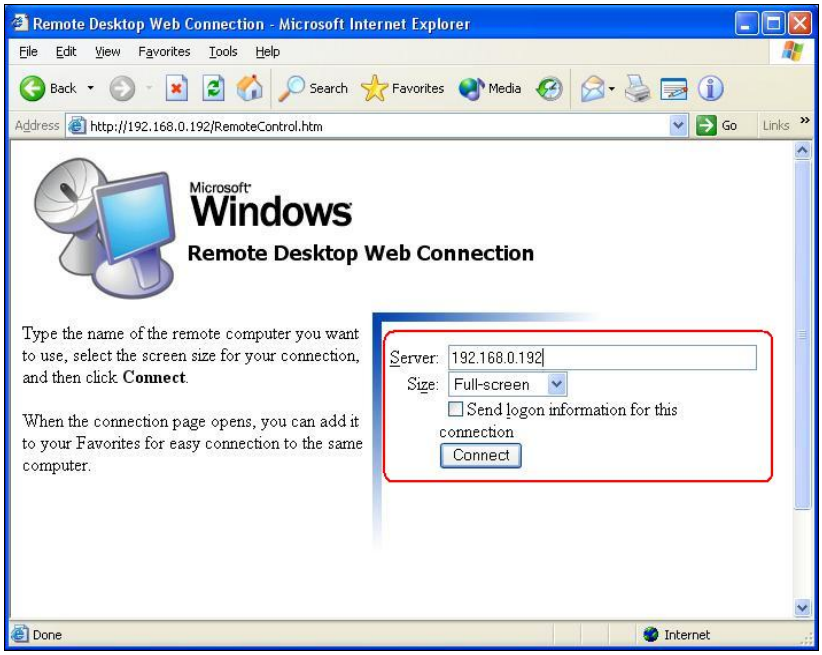

Remote Desktop Web Connection - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://192.168.0.192/RemoteControl.htm
Go Links
Microsoft Windows
Remote Desktop Web Connection
Type the name of the remote computer you want to use, select the screen size for your connection, and then click Connect.
When the connection page opens, you can add it to your Favorites for easy connection to the same computer.
Server: 192.168.0.192
Size: Full-screen
Send logon information for this connection
Connect
Done
Internet

Figure 6-44 *Remote desktop control*

3. Type the IP address or domain name of the GV-System you wish to control, and then click the Connect button. A valid user name and password are required.

If logging in successfully, you will see the desktop of the GV-System you want to control.

Note:

1. The Enable Directdraw Overlay option in the Main System must be disabled.
2. The DSP card cannot support this function.

Remote Viewing with PDA

G-View is a remote view application for Pocket PC device. It can run on PDA using Windows CE or Microsoft Pocket PC operating system.

G-View Installation

G-View is included in the Surveillance System Software CD. This application should be installed in a PDA device with Microsoft Pocket PC operating system.

1. Plug your PDA via USB or COM port to a computer installed with **Microsoft ActiveSync** (The Microsoft ActiveSync program should come with your PDA software CD. Consult your PDA user's manual).
2. Run **Microsoft ActiveSync** in the connected computer. Make sure both the PDA and computer are synchronized.
3. Insert the Surveillance System Software CD to the computer. It will run automatically and pop up a window.
4. Select the item of **Install V8.0.0.0 System**, and then click **PDA Viewer for WinCE**.
5. Follow the on-screen instructions to complete the installation.

Connecting G-View to GV-Server

Once G-View is installed into your PDA, you can use it to monitor your GV Server. Make sure your PDA has wireless LAN adapter properly in place with access to the Internet.

1. Execute **G-View** in your PDA.
2. Click the **Connect** button located at the lower left corner. This displays the Login screen.
3. Type the IP address of the GV Server you wish to connect, enter a valid username and password, and then click the **OK** button.

If logging in successfully, you will see video streaming to your PDA. Clicking the **Stop** button can exit the G-View application.

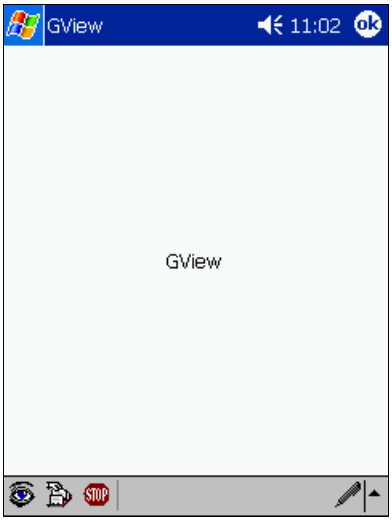


Figure 6-45 *Starting G-View*

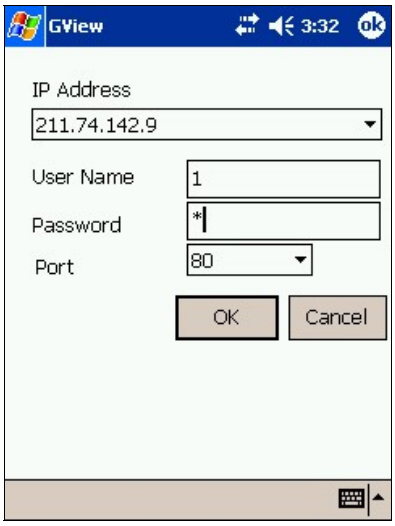


Figure 6-46 *Entering GV-server Info*

Other Functions

The major functions of G-View include live video monitoring, PTZ control, zooming control, and snapshot.

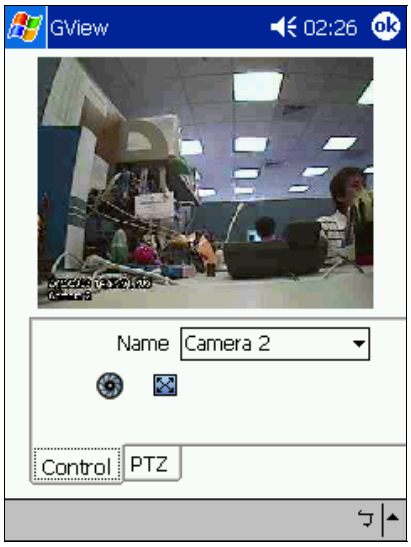


Figure 6-47 *View Screen*

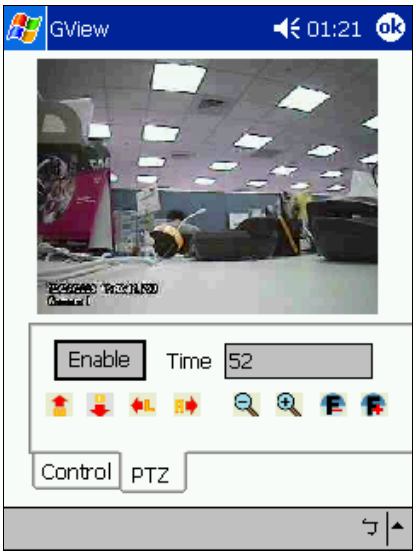


Figure 6-48 *PTZ Screen*

Buttons	Description
	Click to take a snapshot from the video image.
	Use this drop-down list to switch cameras.
	Use the two buttons for focus-in and focus-out control
	Use the two buttons for zoom-in and zoom-out control.
	Use these buttons to control left, up, down, and right of the PTZ camera.
	Click to switch to a full-screen view.

Viewing GV-Server Information

Click on the **Server Information** button to bring up the Server Info screen, which contains the following four categories of information. You may use the control tabs to toggle between them.

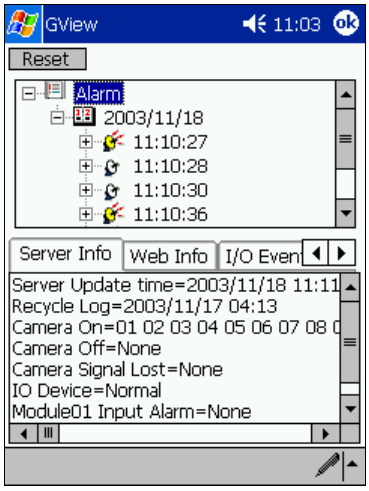


Figure 6-49 *Server Info*

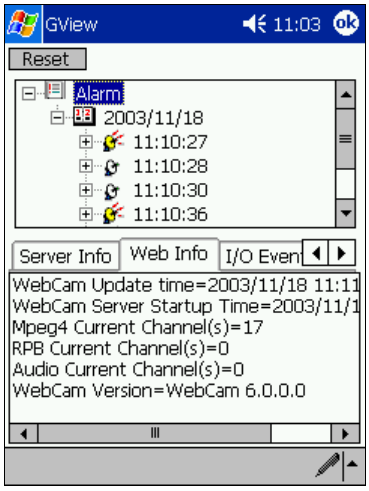


Figure 6-50 *Web Info*

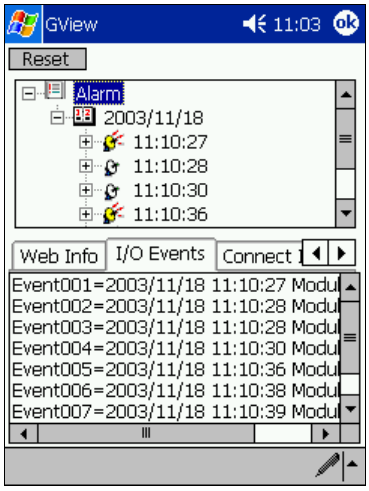


Figure 6-51 *I/O Events*

[Server Info] Displays general information of the connected server. Information in this section includes: Server update time, last data recycle date and time, which cameras are online, which cameras are off line, which camera lost video signals, the status of the connected I/O device, and connected I/O module's alarm status.

[Web Info] Displays information of the connected WebCam server. Information in this section includes: WebCam update time, WebCam server start time, how many MPEG4, RPB, and audio streaming channels are currently serving over the Internet, and the software version of the WebCam.

[I/O Event] Displays a list of alarm events occurred in the selected GV Server. The alarm status is displayed in a 3 levels file tree in the upper section of the screen. Click **Reset** will clear the list.

[Connect Info] Displays a history of login and logout information.

Remote Viewing with Mobile Phone

With the mobile phone capable of GPRS, you can receive live video images from your GV Server. There are three types of mobile phones supporting this application: (1) I-Mode Phone, (2) Windows-based Phone, and (3) Symbian-based Phone.

I-Mode Phone

You can monitor your GV Server remotely with

- I-Mode phone, or
- Mobile phone supporting xhtml, chtml, or html and capable of GPRS

When using i-Mode services, you do not pay for the time you connected online, but will be charged by the volume of data transmitted and/or received. Therefore, i-Mode will NOT receive live video streaming; instead, it will receive one image at a time and will not receive another unless it is requested to do so. To request another image, simply press the Enter key on your i-Mode phone. The images are in GIF or JPEG format with resolution of 96x72 pixels.

Activating the i-Mode Function

In the Main System, click the **Network** button, select **WebCam Server**, click the **JPG** tab, and check the **Create JPEG/GIF file(s)** as shown in Figure 6-6. Your GV-System must use a global IP address and be accessible from the Internet.

Connecting to GV Server

After activating the i-Mode function, you can now receive live images from the GV Server via an i-Mode phone. The interface and operation of your i-Mode phone may be different from the following example since the interface may vary from model to model.

1. Open the i-Mode menu, and select **Input Web Address**.
2. Enter the IP address of your GV-System in the Address column, and then press **OK**.

Figure 6-52 *Opening the menu*

Figure 6-53 *Entering the IP address of GV-server*

3. Type a valid user name and password, and then press **Submit**.

4. Select the desired camera channel, and then press **Enter**.

Figure 6-54 *Entering the use name and password*

Figure 6-55 *Selecting a camera for live view*

If you log in successfully, the i-Mode phone will start receiving live images from the GV Server.

Windows Smartphone

With the MSView application, you can monitor your GV Server remotely via a Windows-based smartphone edition 2002 and 2003. You will experience live view when continuously receiving JPEG format images with the 160x120 resolution.

Installing MSView

1. Insert the Surveillance System Software CD. It will run automatically and pop up a window.
2. Select the item of **Install V8.0.0.0 System**.
3. Select **MS Smart Phone Viewer**, and then follow the on-screen instructions.
4. Locate **MSView.exe** in the Smart Phone Viewer folder created in your computer. The default
5. directory is C:\ Smart Phone Viewer.
6. Install **MSView.exe** to your smartphone (Consult your smartphone user's manual for how to install a program to the smartphone).

Activating the MSView Function

You must activate the MSView function in the Main System to allow the smartphone application. The activation is the same as that in *Activating the I-Mode Function* earlier in this chapter.

Connecting to GV Server

The following operations may vary slightly for different modules.

1. Execute **MSView.exe** in your smartphone. Figure 6-56 appears.
2. Select **Control** and then **Connect**. Figure 6-57 appears.
3. Enter the IP address and port number of your GV Server, a login ID and password. Select **Control** and then **Connect**.

Once the connection is established, the live image will appear. You can use the scroll key on your smartphone to navigate camera channels. See Figure 6-58.

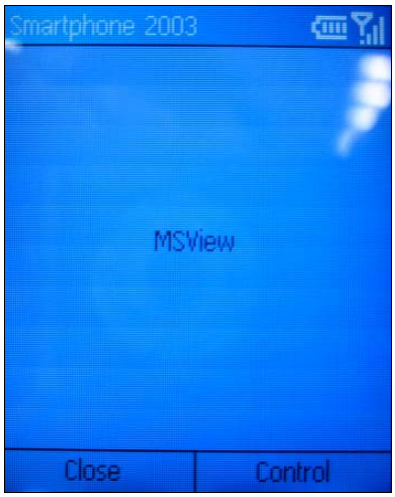


Figure 6-56 *MSView Main Screen*

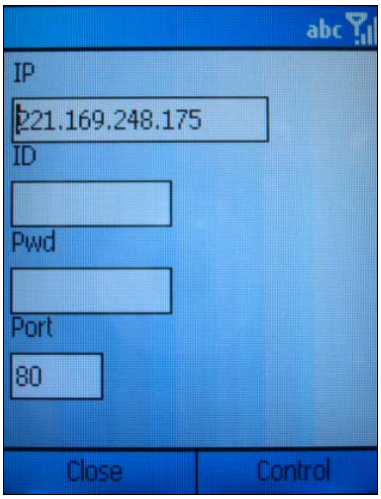


Figure 6-57 *Entering GV Server Info*

Figure 6-58 *Viewing live camera*

Other Functions

In addition to live view, MSView offers the functions, such as zooming in/out a camera view and rotating images.

Select the **MSView** option to have these features.

Symbian Smartphone

With the SSView application, it's also possible to monitor your GV Server remotely via Symbian-based smartphone edition 7.0. You will experience live view when continuously receiving JPEG format images with the 160x120 resolution.

Installing SSView

1. Insert the Surveillance System Software CD. It will run automatically and pop up a window.
2. Select the item of **Install V8.0.0.0 System**.
3. Select **Symbian Smart Phone Viewer**, and then follow the on-screen instructions.

4. Locate **SSView.jar** in the Symbian Phone Viewer folder created in your computer. The default directory is C:\Symbain Phone Viewer.
5. Install **SSView.jar** to your smartphone (Consult your smartphone user's manual for how to install a program to the smartphone).

Activating the SSView Function

You must activate the SSView function in the Main System to allow the smartphone application. The activation is the same as that in *Activating the I-Mode Function* earlier in this chapter.

Connecting to GV-Server

The following operations and screens may vary slightly for different modules.

1. Execute **SSView** in your smartphone.
2. When the message *V8.0.0.0* appears, select **Login**. The Login screen appears.
3. Enter the IP address and port number of your GV Server, login username and password.
4. Select **Connect**. When the message *Host Connected* appears, it means you have connected to your GV Server successfully.
5. Select **Image View**. The Camera List screen appears.
6. Highlight one camera, and then select **Open Camera** for live view.

My Server

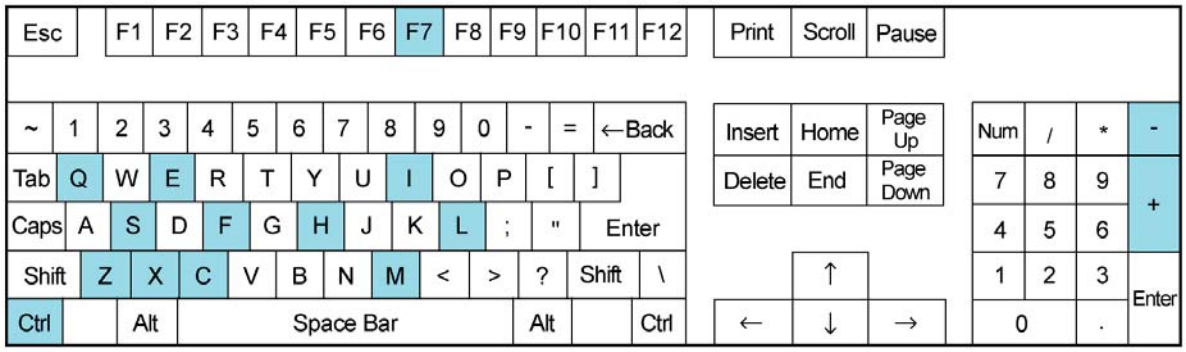
You can create, edit and remove a list of servers for a quick connection. Select the **My Server** option, and then select **SSView** to have these features.

Other Functions

In addition to live view, SSView offers other useful functions, such as changing camera channels, zooming in a camera view, rotating images and seeing Server and WebCam information. Select the **SSView** option to have these features.

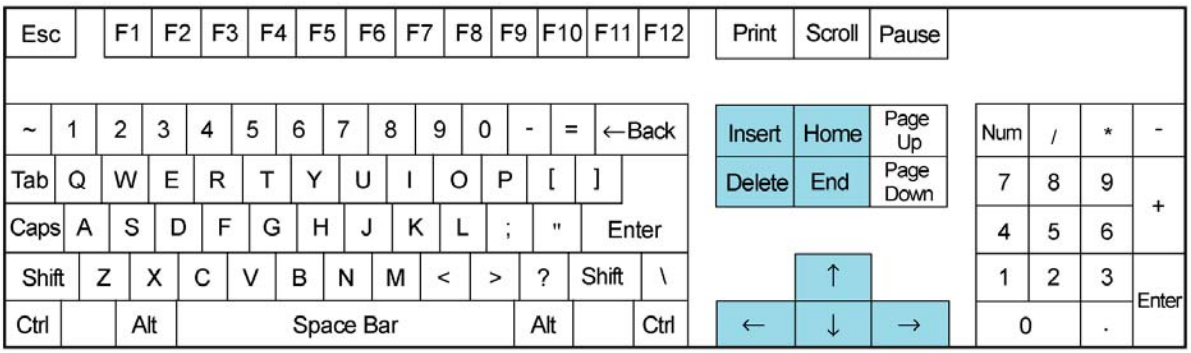
Fast Key Reference

The Multi View Window


Esc
F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12
Print Scroll Pause
~ 1 2 3 4 5 6 7 8 9 0 - = ←Back
Tab Q W E R T Y U I O P [ ]
Caps A S D F G H J K L ; " Enter
Shift Z X C V B N M < > ? Shift \
Ctrl Alt Space Bar Alt Ctrl
Insert Home Page Up
Delete End Page Down
↑
← ↓ →
Num / * -
7 8 9 +
4 5 6
1 2 3 Enter
0 .

Key	Function
Ctrl+Z	Minimize the MultiView window
Ctrl+I	Open the Host Information window
Ctrl+E	Open the Edit Host window
Ctrl+C	Open the Configure window
Ctrl+H	Open the Camera Status window
Ctrl+X	Close the MultiView
Ctrl+Q	Switch screen divisions
Ctrl+F	Switch to full screen view
Ctrl+S	Take a snapshot
Ctrl+M	Turn the microphone on and off
Ctrl+L	Turn the speaker on and off
F7	Start all recording
+	Zoom in the selected monitoring window
-	Zoom out the selected monitoring window

PTZ Control in Multi View


Esc
F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12
Print Scroll Pause
~ 1 2 3 4 5 6 7 8 9 0 - = ←Back
Tab Q W E R T Y U I O P [ ]
Caps A S D F G H J K L ; " Enter
Shift Z X C V B N M < > ? Shift \
Ctrl Alt Space Bar Alt Ctrl
Insert Home Page Up
Delete End Page Down
↑
← ↓ →
Num / * -
7 8 9 +
4 5 6
1 2 3 Enter
0 .

Key	Function
Home	Zoom in
End	Zoom out
Insert	Focus in
Delete	Focus out
→	Right
←	Left
↑	Up
↓	Down

CHAPTER 7

E-Map Application

E-Map displays the monitoring area on an electronic map, by which the operator can easily locate the cameras, sensors and alarms triggered by motion or I/O devices. Topics discussed in this chapter include: creating an E-Map file with E-Map Editor, working with E-Map in the Main System, and working with E-Map on the WebCam server.

The E-Map Editor

The E-Map Editor program allows you to import a floor plan in BMP, GIF and JPG formats, and use the icons of cameras and I/O devices to edit a map per your requirement.

The E-Map Editor program comes with the installation of Main System. Go to the system folder and execute eMap.exe.

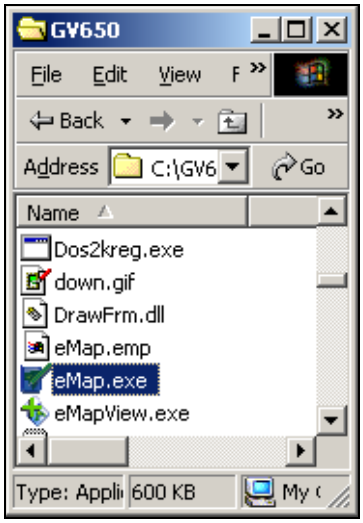


Figure 7-1 *eMap.exe*

The following E-Map Editor window will appear.

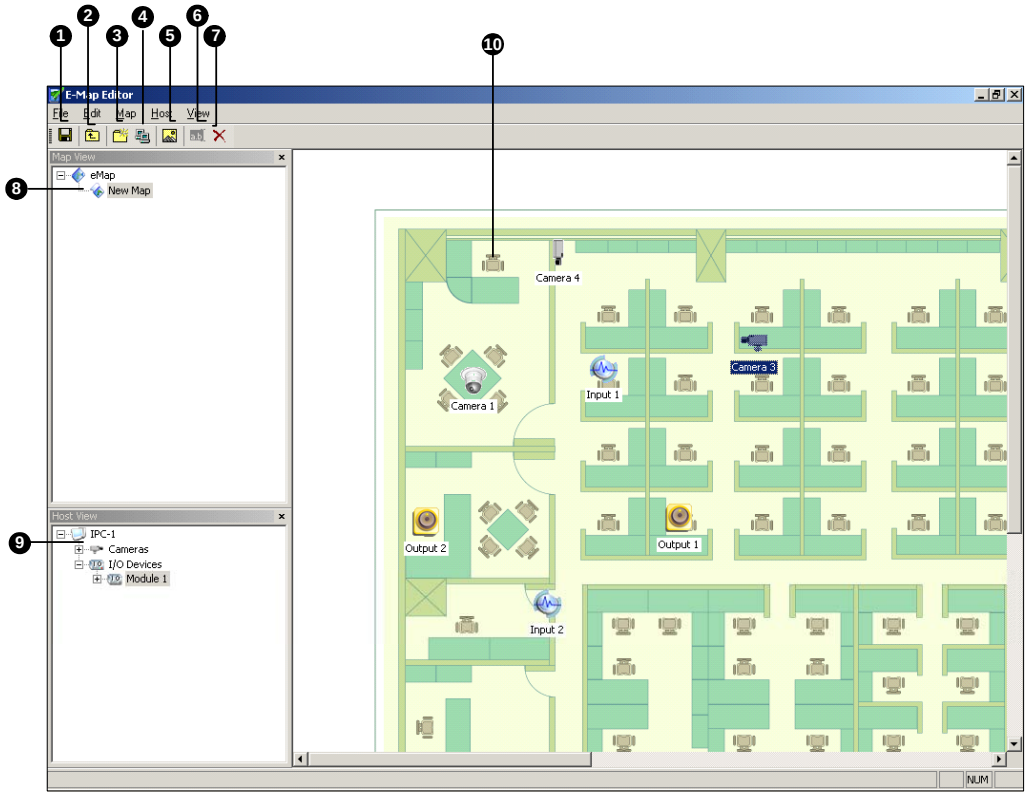


Figure 7-2 *The E-Map Editor Window*

The controls in the E-Map Editor window:

No.	Name	Description
1	Save	Saves a file.
2	Up	Goes back to the previous E-Map file.
3	Add Map	Adds an E-Map file.
4	Add Host	Adds a host folder.
5	Load Map	Imports a floor plan.
6	Rename	Renames an E-Map file and/or folder.
7	Delete	Deletes an E-Map file and/or folder.
8	Map View	Tree view of E-Map files and/or folders.
9	Host View	Tree view of host folders.
10	Floor Plan	The window displays the imported graphic file.

Creating an E-Map File

To create and edit an E-Map file, follow the steps below.

1. Click the **Add Map** button (No.3, Figure 7-1) on the toolbar. A New Map file will be created in Map View and the Floor Plan window separately, as illustrated below.

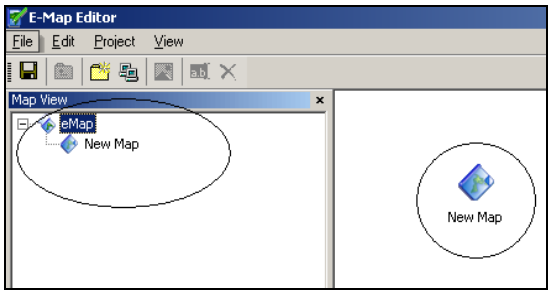


Figure 7-3 *Creating a new map*

2. Click the **New Map** file in Map View, and then click the **Load Map** button (No. 5, Figure 7-1) to import a graphic file. The file will open in the Floor Plan window. See Figure 7-1.
3. Double-click the local server folder in Host View. The program will automatically detect the number of cameras and I/O devices already installed at the server, and show up their separate icons.
4. Drag and drop these icons from Host View onto the map in the Floor Plan window.
5. The E-Map Editor lets you set the orientation of camera icons and change the icons. Right-click any camera icon to call up a menu, and select the direction where you want the camera points to. Or change the camera icon into the dome icon.
6. Click **Save** (No. 1, Figure 7-1) to save the created E-Map file.

Creating an E-Map File for a Remote Host

With E-Map Editor, you can create E-Maps for your local host, as well as remotely for other hosts. E-Maps created for remote hosts are saved and viewable only at the server where they are created. And they are only functional when connected to the WebCam server.

1. Click the **Add Host** button (No. 4, Figure 7-1) on the toolbar. A new host folder then is added in Host View.
2. Right-click the **Host** in Host View, and then select **Host Settings** to display the following dialog box.

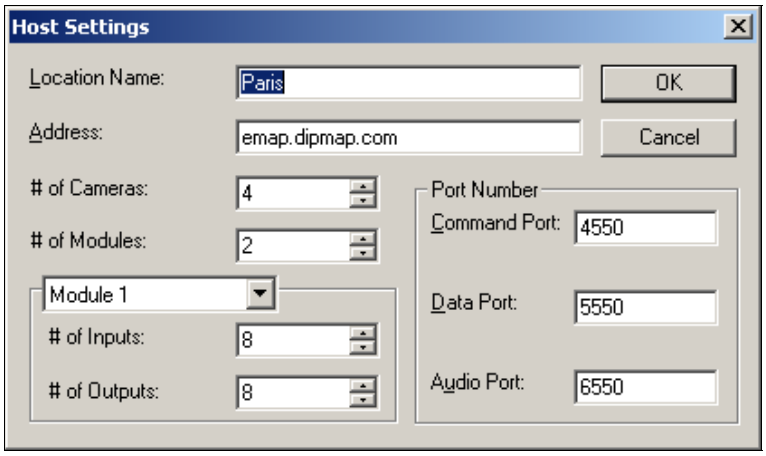


Figure 7-4 *Host Settings*

3. Type the remote host's name, IP address, how many cameras, I/O modules, inputs, outputs are installed at the host, and port information. Then click **OK**.
4. Follow the steps instructed in *Creating an E-Map File* to create a file for the remote host.

Starting E-Map

After creating an E-Map file, go to the Main System. Click the **ViewLog** button and then select **E-Map** to display the following E-Map Viewer window. Double-click any E-Map file of the local host to open it.

Note: If you have created the E-Map files for remote hosts, these files will also be displayed in the E-Map Viewer window but won't function here. They only work on WebCam that is discussed later.

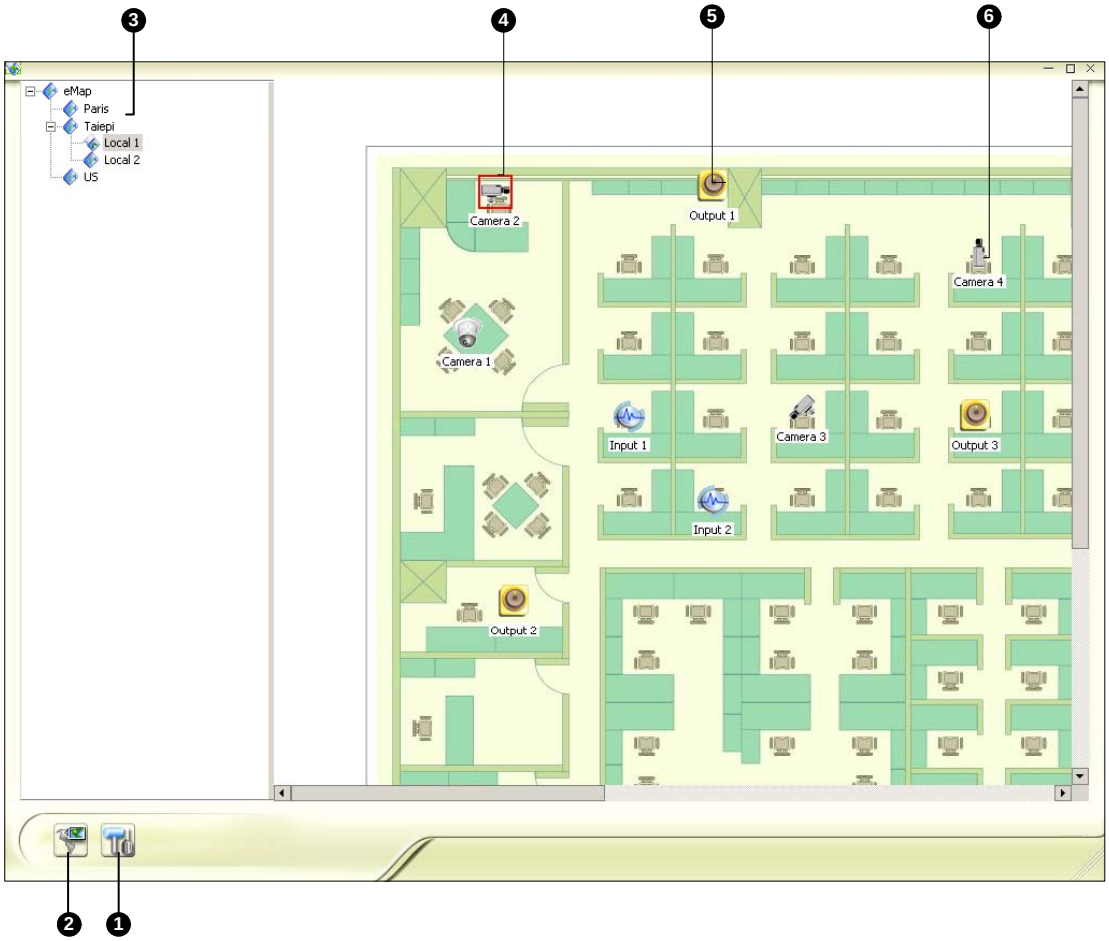


Figure 7-5 *The E-Map Viewer Window*

The controls in the E-Map Viewer window:

No.	Name	Description
1	Popup Settings	Selects desired cameras and I/O devices for the pop-up map function.
2	Toggle Popup	Toggles between popup and non-popup function.
3	Tree View	The tree view of E-Map files and folders.
4	Flashing Icon	The flashing icon represents a triggered camera or an I/O device.
5	Output Icon	Manually forces an output device.
6	Camera/Dome Icon	Views the live video associated with that camera/dome.

Setting the Pop-up Map Function

The E-Map Viewer window can be set to pop up with the flashing icon indicating that a camera or an input device is triggered. To set up the function, follow the steps below.

1. Click the **Popup Settings** button (No.1, Figure 7-5). Select desired cameras and input devices for the application, and specify **Dwell Time** for the interval between two pop-up maps.
2. Click the **Toggle Popup** button (No.2, Figure 7-5) to enable the function.
3. Minimize the E-Map Viewer window. Once any camera or input device is triggered, the map will pop up on your screen immediately.

Starting E-Map from a Remote Site

Activating and configuring E-Map over a web browser is possible by the GV-developed WebCam server. To do so, follow the steps below.

1. At the local server equipped with the GV-System, click the **Network** button and select **WebCam Server** to display the Server Setup dialog box. Click **OK** to start the WebCam server.
2. At the client PC, open the web browser and type the address of the local server. Once the connection is established, the WebCam Compression Selection window will appear. Refer to Figure 6-14 in Chapter 6.
3. Select **EMap**, and click **Submit** to display the E-Map window on the client PC.

The Remote E-Map Window

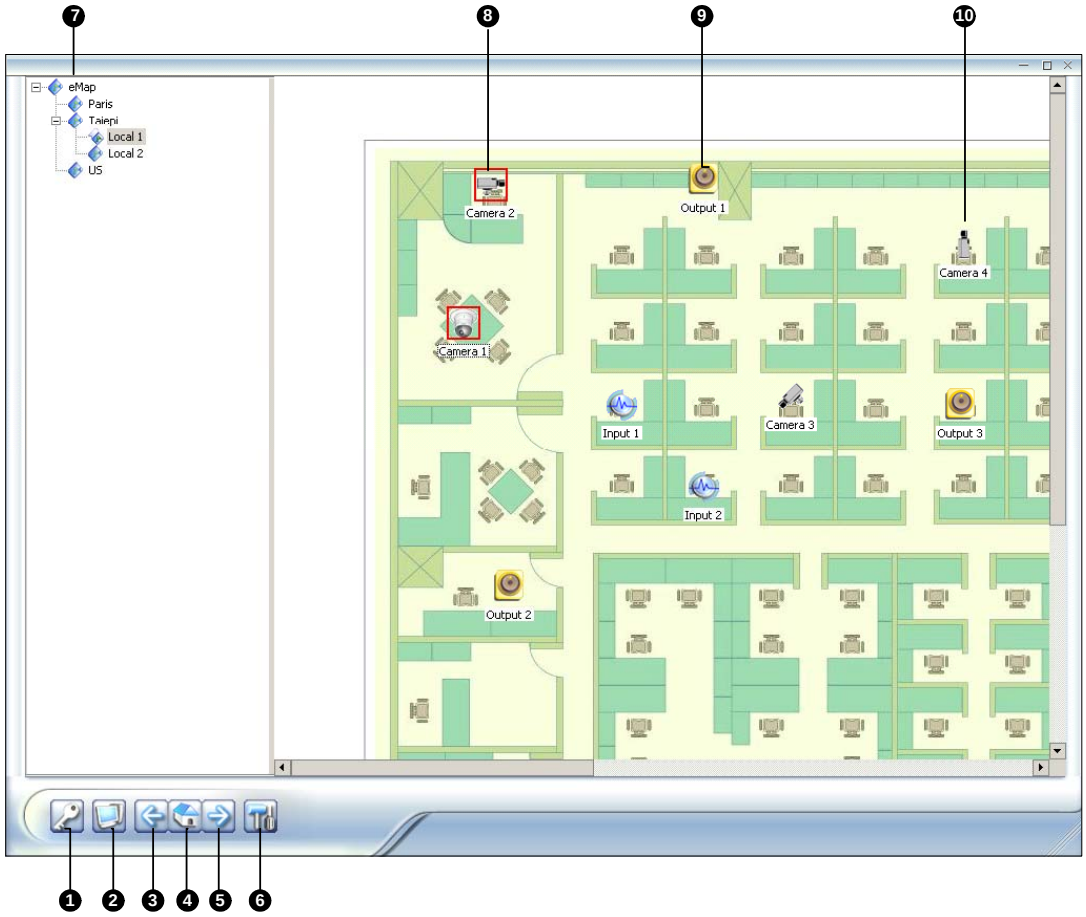


Figure 7-6 *The Remote E-Map Window*

The controls in the Remote E-Map window:

No.	Name	Description
1	Login	Click to login up to 500 host servers.
2	Host Information	Click to view the information of incoming events upon motion detected and I/O devices triggered.
3	Previous	Click to go to the previous E-Map file.
4	Home	Click to back to the top of the tree view.
5	Next	Click to go to the next E-Map file.
6	Configure	Click to configure the Remote E-Map window.
7	Tree List	The list displays all created E-Map files and folders.
8	Flashing Icon	The flashing icon represents a triggered camera or I/O device.
9	Output Icon	Click to manually force the output device.
10	Camera/Dome Icon	Click to view the live video associated with that camera/dome.

Logging in Different Hosts

When the client PC connects to WebCam server, all the E-Maps saved in the local server will be downloaded to the client PC, with the E-Map files of 500 hosts at most. The E-Maps created for remote hosts can only function on WebCam after you log in these hosts. You can login 500 hosts at a time. Click the **Login** button (No. 1, Figure 7-6) to display the following Login window.

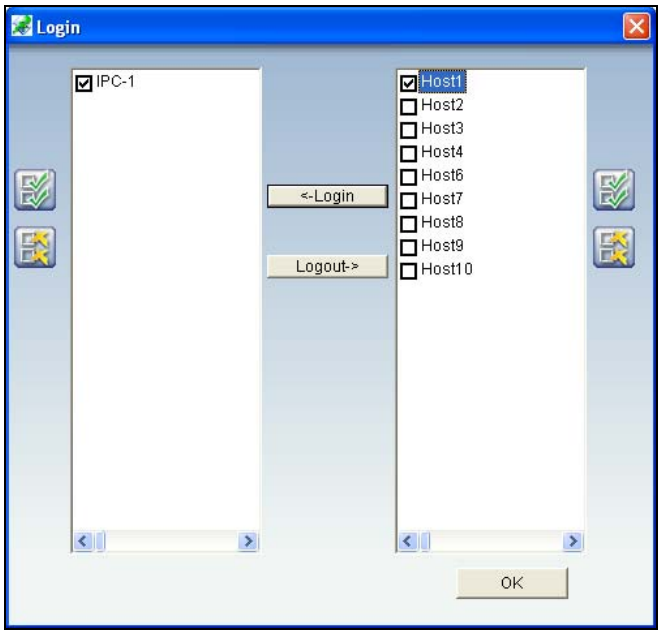


Figure 7-7 *Logging in different hosts*

Configuring the Remote E-Map Window

Click the **Configure** button (No. 6, Figure 7-6) to display the following dialog box:

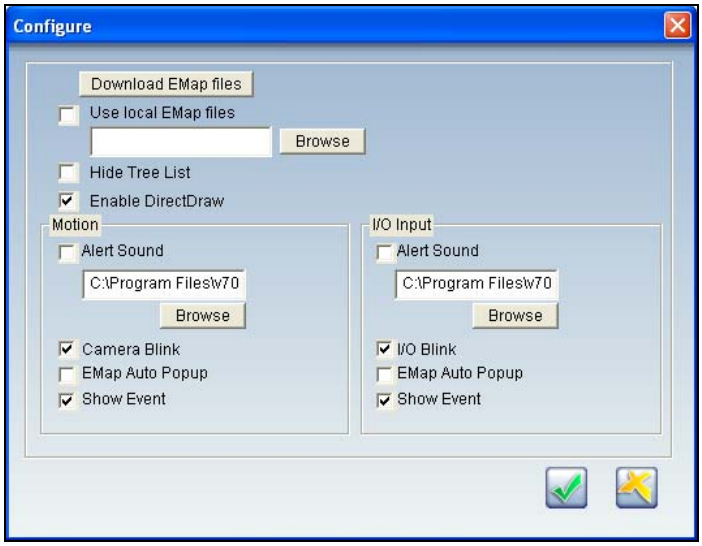


Figure 7-8 *The Configure window*

[Download EMap files] Click to download E-Map files from the local server to the client PC. This option can reduce network load when you want to view E-Maps of multiple hosts.

- **Use local EMap files:** Once downloading E-Map files to the client PC, you can use these E-Map files for connection.
- **Hide Tree List:** Check to hide the tree list.
- **Enable DirectDraw:** The DirectDraw is enabled by default. Some VGA cards might not support DirectDraw and can produce distorted frames. In this case, disable the feature.

[Motion] / [I/O Input]

- **Alert Sound:** Check this option and assign a .wav file to alert the operator when motion is detected or I/O devices are triggered.
- **Camera Blink, I/O Blink:** When cameras or I/O devices are triggered, their icons on the E-map flash. Uncheck this option if you don't want to see the flashing icons.
- **EMap Auto Popup:** When cameras or I/O devices are triggered, the related map will pop up on the screen instantly. Check this option and minimize the Remote E-Map window for the application.
- **Show Event:** Check to display motion or I/O triggered events on the Host Information window.

Viewing Host Information

The Host Information window lists camera and I/O device trigger information. Click the **Host Information** button (No. 2, Figure 7-6) to display.

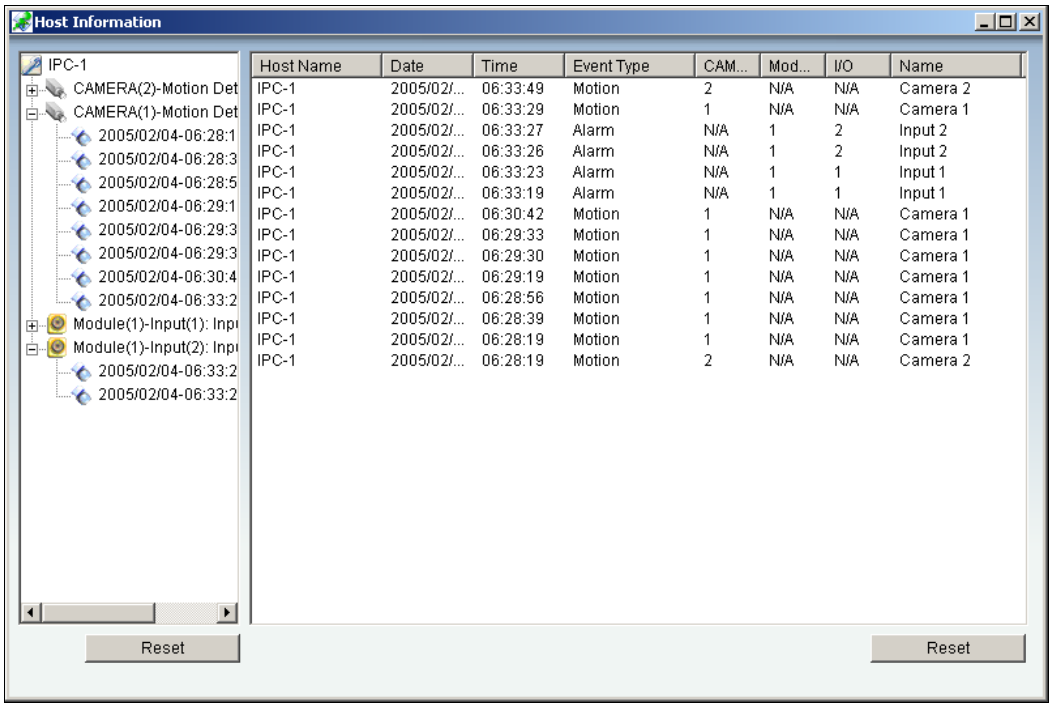

Host Information
IPC-1
CAMERA(2)-Motion Det
CAMERA(1)-Motion Det
2005/02/04-06:28:1
2005/02/04-06:28:3
2005/02/04-06:28:5
2005/02/04-06:29:1
2005/02/04-06:29:3
2005/02/04-06:29:3
2005/02/04-06:30:4
2005/02/04-06:33:2
Module(1)-Input(1): Inpu
Module(1)-Input(2): Inpu
2005/02/04-06:33:2
2005/02/04-06:33:2
Host Name Date Time Event Type CAM... Mod... I/O Name
IPC-1 2005/02/... 06:33:49 Motion 2 N/A N/A Camera 2
IPC-1 2005/02/... 06:33:29 Motion 1 N/A N/A Camera 1
IPC-1 2005/02/... 06:33:27 Alarm N/A 1 2 Input 2
IPC-1 2005/02/... 06:33:26 Alarm N/A 1 2 Input 2
IPC-1 2005/02/... 06:33:23 Alarm N/A 1 1 Input 1
IPC-1 2005/02/... 06:33:19 Alarm N/A 1 1 Input 1
IPC-1 2005/02/... 06:30:42 Motion 1 N/A N/A Camera 1
IPC-1 2005/02/... 06:29:33 Motion 1 N/A N/A Camera 1
IPC-1 2005/02/... 06:29:30 Motion 1 N/A N/A Camera 1
IPC-1 2005/02/... 06:29:19 Motion 1 N/A N/A Camera 1
IPC-1 2005/02/... 06:28:56 Motion 1 N/A N/A Camera 1
IPC-1 2005/02/... 06:28:39 Motion 1 N/A N/A Camera 1
IPC-1 2005/02/... 06:28:19 Motion 1 N/A N/A Camera 1
IPC-1 2005/02/... 06:28:19 Motion 2 N/A N/A Camera 2
Reset
Reset

Figure 7-9 *Host Information*

The Host Information window allows you to play back events happened in the host sites. Double-click any camera event in the left hand list to display the remote playback window. With this window, you can play back an event, speak to the host site and take a snapshot, as well as download the event to the client PC.

Figure 7-10 *The Remote Playback Window*

CHAPTER

8

Live Viewing Using Remote Applications

The system is supplied with three remote applications.

Remote View System

IP Multicast System

Remote View

Remote View is used to remotely monitor live videos from Main System, through modem dial-up or TCP/IP connection. Each Remote View is limited to only one login at a time. However, you may open multiple Remote Views in one workstation and each login to a different main system.

Setting Up Remote View

The Remote View software is included in the Surveillance System Software CD. The application is to be installed at the client PC with modem dial-up or TCP/IP network access. The following is the minimum PC specifications for this application:

OS	Windows 2000, XP, 2003 Server
CPU	Pentium 500 (minimum)
Memory	128MB RAM
Hard Disk	20GB (minimum)
VGA	NVIDIA GeForce II 32MB, 800x600 screen resolution (minimum)
Network	TCP/IP, Modem Dial-up

Setting Up the Connection

Remote View allows two connection methods, and each are set up as follows.

To set up modem connection:

1. Make sure modems at client PC and at sever PC are already setup. The system currently supports only external modems.
2. Click the **Network** button on main screen and enable **Modem Server** from menu.
3. Click **Preference** and then select **Configure Modem**. Select the network to use from drop-down list.
4. Click the **Connect** button from menu bar of Remote View, and then select **Dial-Modem** from menu to bring up the Connect dialog box, as shown:

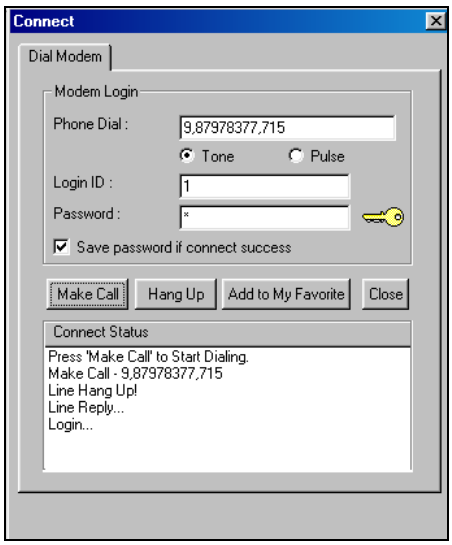


Figure 8-1 *Making connection to GV system through dial-up connection.*

5. In the Phone Dial field, type the telephone number you wish to use (this column memorizes 10 most recently used telephone numbers).
6. Enter a valid user ID and password, and then click the **Make Call** button. Messages should appear in the Connect Status window when connection successful, shown previous in Figure 8-1.

To set up TCP/IP connection:

1. Make sure both your client PC and the sever PC have access to TCP/IP network.
2. Click the **Network** button on main screen and enable **TCP/IP Server** from menu.
3. Click the **Connect** button from menu bar of Remote View and select **Internet/Intranet_TCP/IP** to bring up the following dialog box:

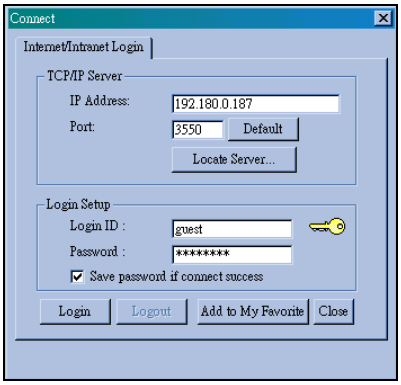


Figure 8-2

4. In the IP Address field, type the IP address or domain name of the system you wish to connect to. The field memorizes 10 most recently used addresses.
5. Type in port number in Port field. Use default value if you are not sure what to enter for this field.
6. Enter a valid user ID and password and then click the **Login** button. Video stream should appear when connection succeeds, as shown:

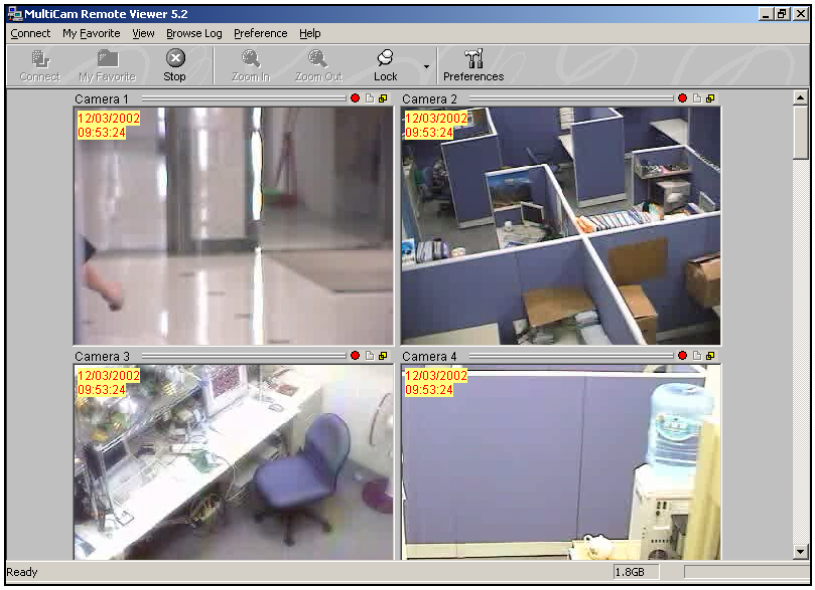


Figure 8-3

Functions of toolbar buttons are listed in following table:

Button	Description
Connect	Selects modem dial-up or TCP/IP connection.
My Favorite	Adds to My Favorite
Stop	Terminates network connection
Zoom In	Enlarges video.
Zoom Out	Shrinks video.
Lock	Locks a particular camera.
Preferences	Brings up the preferences setting window.

Working with My Favorite

My Favorite provides for fast access to pre-set connection to main system. Several settings are available for this feature.

To add a connection to My Favorite:

1. Click **My Favorite** button from menu bar.
2. Select **Add to My Favorite** from the menu to bring up Add to My Favorite dialog box, shown as follows.

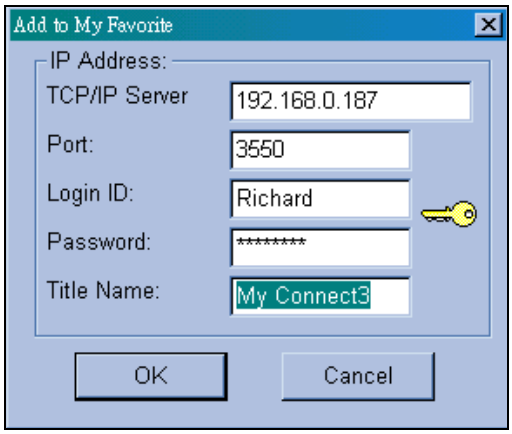


Figure 8-4

3. Enter the proper information and give a name to the new connection, and then click **OK**.

To edit My Favorite:

1. To change information in My Favorite, click **My Favorite** button from menu bar.
2. Select **Edit My Favorite** from menu.
3. Select a connection you wish to edit.

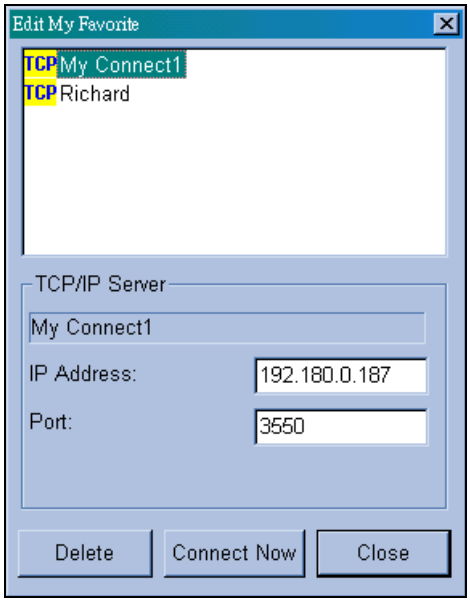


Figure 8-5

Go to My Favorite:

Once a connection is added, it is listed in menu. Click the connection from menu to login a system.

Camera Zoom Function

Click the Zoom In and Zoom Out buttons in the toolbar to enlarge and shrink a particular camera view, here are the steps:

1. Click on the view screen you wish to zoom.
2. Click the **Lock** button from the toolbar to lock the camera.
3. Click either the **Zoom In** or the **Zoom Out** buttons, and then click on the locked camera.

Playing with Screen View Window Functions

All live video is displayed in the screen view window, shown as follow:

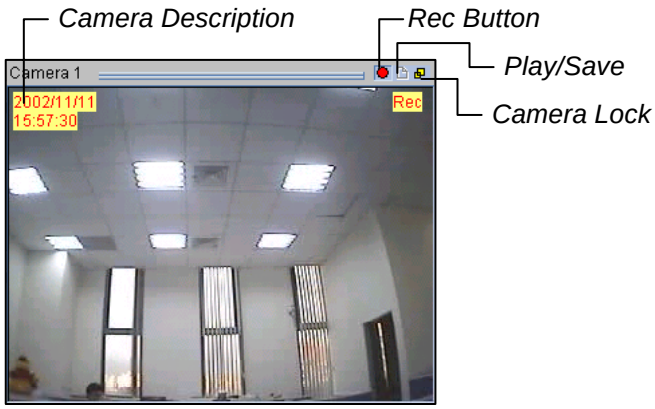


Figure 8-6

Icons appear in view screen represent:

Name	Description
Time Indicator	Indicates current date and time. Color of the text and the background can be changed in Preferences.
Rec	Starts, stops, pauses, and resumes recording
Play/Save	Plays and saves recorded video files
Camera Lock	Locks the image to apply zoom in, zoom out function

Note: The Rec button saves the video files only temporarily as a buffer file, therefore saves only one video clip at a time. If you wish to save the files permanently, use **Play/Save** to save the video clip in AVI format.

Playing Back Video Files in Q-View

Click **Play/Save** button found in the camera screen. This brings up the program Q-View, which is used for instant playback for video files temporarily saved in the Temporarily Record Buffer, created when Rec button is pressed.

Figure 8-7

Preference Settings

Click the **Preferences** button from the toolbar to bring out the corresponding dialog box, shown as:

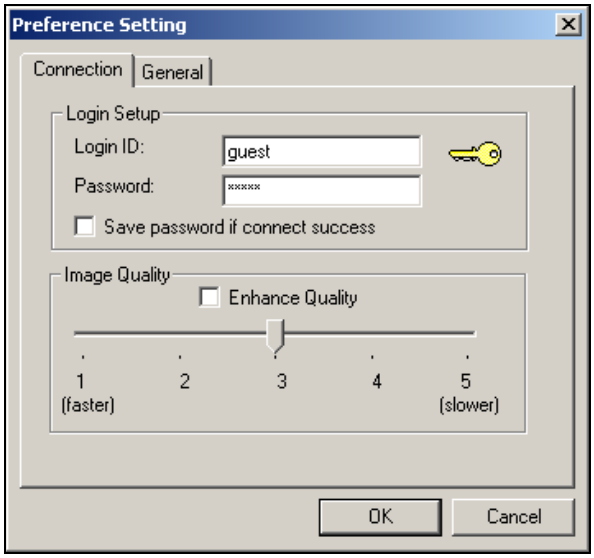


Figure 8-8

The following options are available on the Connection tab of the Preference Setting:

[Login Setup] Specify user name and password for Remote View.

[Image Quality] Specify the compression ratio of the video. Lower number gives higher compression, smaller file size, but the image quality will suffer.

There are also options available on the General tab:

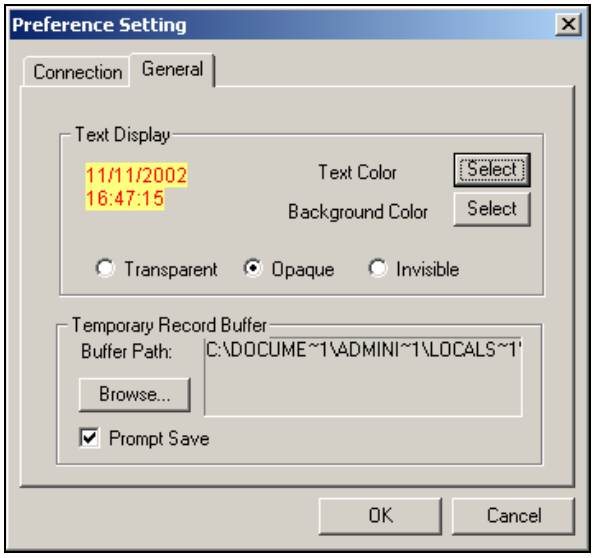


Figure 8-9

[Text Display] Sets camera description's text color and background color. 3 options are available to present the camera description: **Transparent** (text only no background), **Opaque** (text and background), and **Invisible** (no text and no background).

[Temporary Record Buffer] Determines a temporary folder that holds recording videos.

Remote PTZ and I/O Function

If you have installed PTZ or I/O devices on the connected main system, then you will be able to control these devices through TCP/IP or dial-up network.

To use remote PTZ control:

Select **View**, **PTZ Device**, from the menu bar to bring up the PTZ control panel. Use the **PTZ select** buttons to choose the type of camera you wish to control. The control panel may look slightly different depending on camera model.

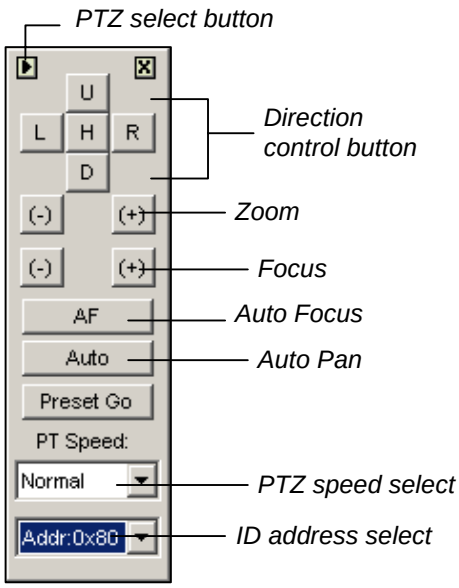


Figure 8-10

To use Remote I/O control:

Select View, I/O Module, from the menu bar to bring up the I/O control panel. Remote View allows you to control only the output devices. Click on the Output signal buttons to send signal to the output device.

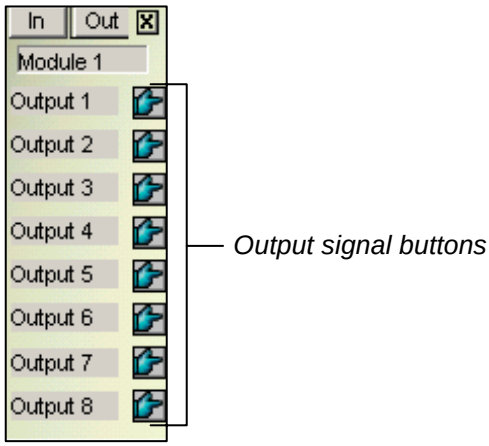


Figure 8-11

Full Screen View

Click **Connect** button and select **Full Screen Mode** from the menu. The full screen mode provides a larger viewing area for the cameras. There are four functional buttons located at the right hand side that allows you to access to some of the basic functions.

Figure 8-12

IP Multicast

It is possible to monitor several GV-Systems within a LAN network, through the use of IP Multicast. An IP Multicast allows maximum of ten connections at a time. After the Live X button pressed, IP Multicast automatically connects to the Main System within the LAN network.

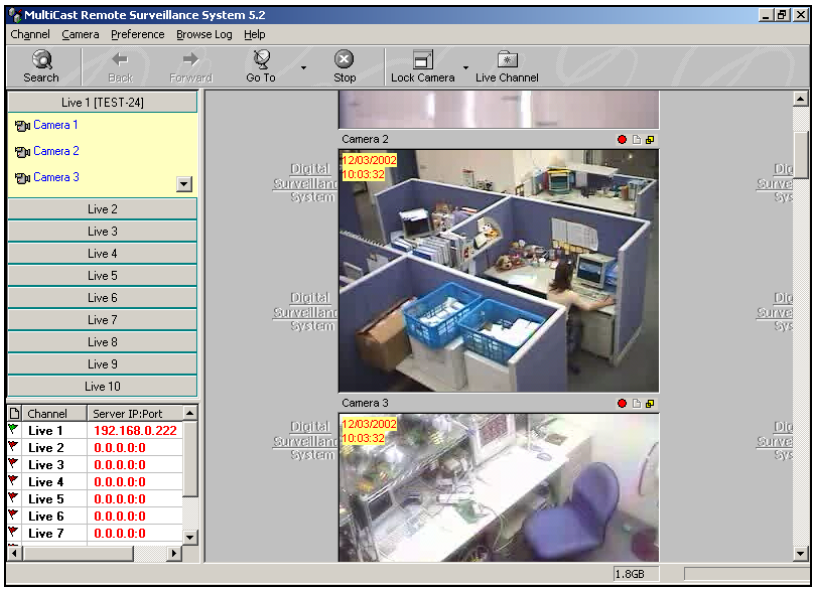


Figure 8-13

Setting Up IP Multicast

The IP Multicast software is included in the Surveillance System Software CD. The application is to be installed at the client PC within LAN network access. PC requirements are the same as those for Remote View, described in the previous section.

Starting IP Multicast

1. Make sure both the client PCs and the server PC are properly set up in local area network (LAN).
2. Click the **Network** button in Main System and select **Multicast Server** to allow connection from client PC. Follow this same step to set up all GV-Systems you wish to connect to IP Multicast.
3. Go to **Windows Start**, **Program**, system folder, and then IP MultiCast System from menu. Run the system at the client PC.
4. Click the **Search** button from toolbar so IP Multicast finds all GV-Systems available for connection within the network. Systems connected to IP Multicast are listed at the lower-left pane with their server IP.
5. Click the **Live** bar to view the desired system. You may be asked to enter Login ID and Password. Make sure your ID is given the privilege to view. All cameras open to the ID will be displayed.
6. To end a connection, click the **Stop** button from toolbar.

Functions of toolbar buttons are listed in following table:

Button	Description
Search	Finds all main systems available for connection within the network
Back	Goes to previous surveillance screen
Forward	Goes to next surveillance screen
Go To	Selects a specific system
Stop	Ends a connection
Lock Camera	Locks a particular screen view
Live Channel	Click to view or to hide a connection

Icons found at the left pane represent:

Button	Description
Live x	Click to view available cameras in the selected system
Flag	Green flag represents the system is connected; red means disconnected

The rest of the functions in IP Multicast are much the same to those in Remote View. For details on using functions in screen views, refer to *Playing with Screen View Window Functions, earlier in this chapter*; to set the Preference dialog box, refer to *Preference Settings*; for features available for full-screen, refer to *Full Screen View*. Video files are also played back in Q-View; refer to *Playing Back Video Files in Q-View*.

Note: Since Q-View only saves one most recently viewed video file in the Temporarily Record Buffer, following message may appear when try to record a second file:

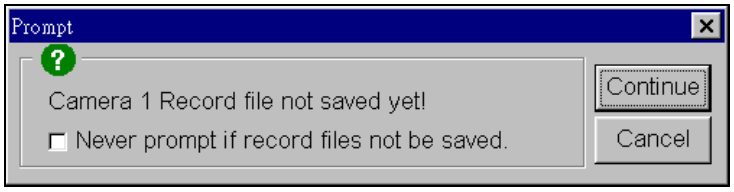


Figure 8-14

This message is to remind you that the video file previously played back has not been saved. Clicking **Continue** would overwrite the previous file. To always save viewed video files to a permanent location, use **Play/Save** button in screen view, instead of the Rec button.

CHAPTER 9

Central Monitoring by Center V2

With Center V2, central monitoring station (CMS) can be deployed immediately because it brings multiple GV-Systems together into an integrated interface, allowing the operator to manage several systems from one point of control. The basic feature of Center V2 is to view live video, and receive video evidence (in an attachment format) when any alerts are sent to the Center V2. This helps the remote-end operator easily determine the nature of the alarm.

Installing Center V2

There are two versions of Center V2. The standard version, coming with the system software, can serve up to **5** subscribers and **80** channels at a time. The professional version can serve up to **500** subscribers and **800** channels. For professional one, see *CMS User's Manual*.

Before installation, make sure your computer meets the following minimum requirements.

The standard version:

OS	Windows 2000, Windows XP, Server 2003
CPU	Pentium 4, 2.0G
Memory	256 MB RAM
Hard Disk	60 GB
VGA	NVIDIA GeForce II 32MB, 1024 x 768 screen resolution
Network	TCP/IP

To install Center V2, follow these steps:

1. Insert the Surveillance System Software CD to your CMS's (Central Monitoring Station) computer. It will run automatically, and a window appears.
2. Select the **Install V8.0.0.0. System** item.
3. Click **CenterV2**, and follow the on-screen instructions.

The Center V2 Window

After the installation, start the application from the Windows Start menu. The following monitoring window will appear. No images will appear until you add and connect to subscribers.

Figure 9-1 *The Center V2 Window*

The controls on the Center V2 window:

No	Name	Description
1	Monitoring Window	Displays live video.
2	Status Panel	Indicates the date, time, remaining disk space, and the total number of online channels versus available channels.
3	Find A Subscriber	Type the desired ID in the Current Subscriber field and click this button to search.
4	Subscriber List	Displays subscribers' ID names and online status. **Blue Icon:** Indicates the subscriber is online. **White Icon:** Indicates the subscriber is off-line. **Alarm Icon:** Indicates either motion has been detected or the I/O has been triggered at the subscriber's site.

5	Event List	Accesses Event Log and Event List.
6	SMS	Configures the SMS service.
7	I/O Device	Configures and forces output devices at Center V2.
8	Screen Division	In the 1024 x 768 resolution, you can select 6, 15, or 24 screen divisions for a single monitor; 9, 25, or 36 screen divisions for dual monitors. In the 1280 x 1024 resolution, you can select 6, 12, or 24 screen divisions for a single monitor; 9, 20, or 42 screen divisions for dual monitors. For resolution, see *Layout Settings* on page 193.
9	Host Info	Displays the connection status of subscribers.
10	Preference Settings	Brings up these options: System Configure, Notification, Password Setup and E-mail Setup.
11	Exit	Closes or minimizes the Center V2 window.
12	Accounts	Adds, deletes or modifies subscriber accounts.
13	Refresh Channel	Refreshes the connection status.
14	Next Page	Displays the next page of camera views.
15	Previous Page	Displays the previous page of camera views.
16	Flag	Flags an event for later reference.
17	Clip	Indicates an event coming with an attachment. Double-click the event to open the attached video file.
18	ID	Indicates a subscriber's ID.
19	Event Type	Indicates the event type: Alarm, Attachment, Connection, Login/Logout, Motion, System, and Trigger.
20	Message	Indicates associated information for each event type.
21	Message Time	Indicates when Center V2 receives an event.
22	Start Time	Indicates when an event happens at the subscriber's site.

A list of Types and Messages will be displayed on Center V2:

Type	Message
Motion	Camera xx detected motion.
Trigger	Module xx triggered.
Connection	Camera xx video lost; Module xx I/O lost; Network abnormal; Fail to login to dispatch server; Dispatch server is shutdown; Video signal of xx has resumed; Module xx has returned to normal; Failed to login SMS server; Failed to send short message; SMS server is shutdown.
Alarm	Disk Full; Restarted Failed; Multicam Closed; There isn't enough space for recording; Multicam Surveillance System has been closed; An unexpected error occurred in Multicam Surveillance System. (Error Code: 1 or 2); There is an intruder; Object Missing; Unattended Object; Alert Message of POS; Scene Change.

System	Start/end service; IP change; Record failed; Status change of monitoring camera. On: xx Off: xx /(By Schedule); Stop/start all cameras monitoring; Start/stop I/O Monitoring. /(By Schedule); Schedule start; Schedule stop. All monitoring devise are stop too; Start monitoring all type events; Stop monitoring all type events; Subscriber session is not established. Wait-time expired; Unexpected logout before subscriber session is completed.
Attachment	Record file of Camera xx.

Note: Error Code 1 indicates a codec error; Error Code 2 indicates that users can't write or record any data due to HD failure or user privilege.

Creating a Subscriber Account

Before starting Center V2, add one subscriber to the center at least. The standard version of Center V2 only allows **5** subscriber accounts. On the Center V2 window, click the **Accounts** button (No. 12, Figure 9-1). The Address Book window appears.

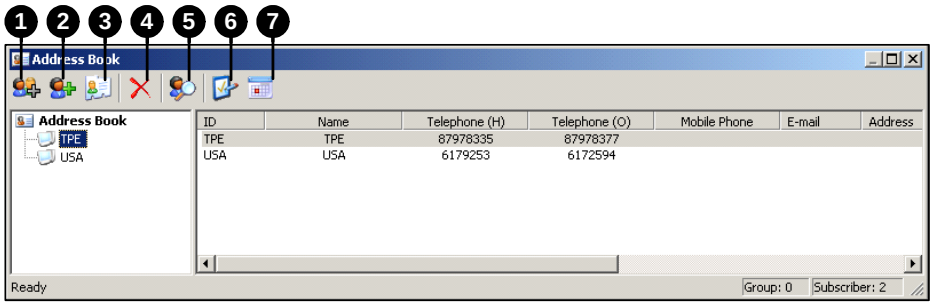


Figure 9-2 *Subscriber Information*

The buttons of the toolbar:

No.	Name	Description
1	Add A Group	Adds a group.
2	Add A Subscriber	Adds a subscriber
3	View/Edit Subscriber Address Book	Highlight one subscriber and click this button to open Subscriber Address Book for viewing and editing.
4	Delete A Group/Subscriber	Highlight a group or a subscriber and click this button to delete it.
5	Find A Subscriber	Searches a subscriber account.
6	Subscriber Settings	Highlight one subscriber and click this button to configure the settings of video and alert formats.
7	Subscriber Schedule	Sets up subscription schedules.

Creating a Subscriber

1. Click the **Add A Group** button (No. 1, Figure 9-2) to create a group.
2. Click the **Add A Subscriber** button (No.2, Figure 9-2). The Subscriber Address Book dialog box appears.

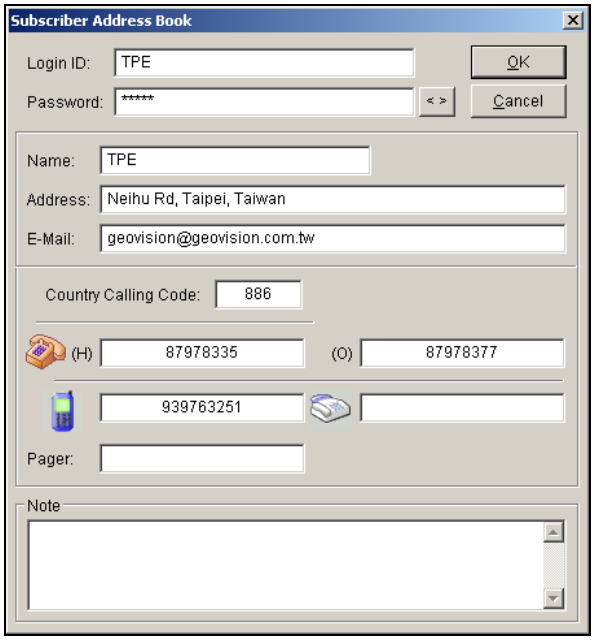


Figure 9-3 *Address Book of a subscriber*

3. Enter a login ID and password (required). Those will be the ID and password for the subscriber to log in to the Center V2. See Figure 9-12.
4. Enter the subscriber's contact information in the rest of fields (optional).
   - If you wish to send e-mail alerts to this subscriber, enter its e-mail address. For e-mail settings, refer to *E-Mail Alerts,* later in this chapter.
   - If you wish to send SMS alerts to this subscriber, enter its country code and mobile number. For SMS server settings, refer to *SMS Alerts,* later in this chapter.
5. Click the **OK** button to save the above settings. You will be prompted to this dialog box.

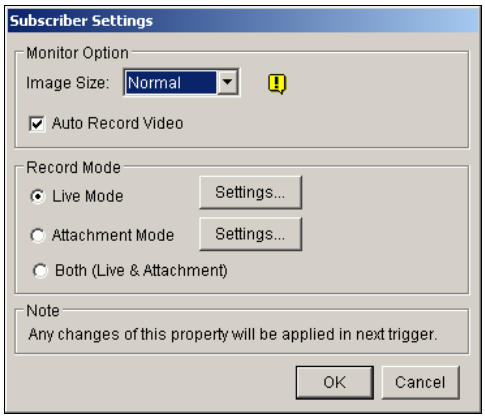


Figure 9-4 *Subscriber Settings*

6. The options in the dialog box are discussed below. You may accept the default settings here,

and edit them later by clicking the **Subscriber Settings** button (No. 6, Figure 9-2) on the toolbar. When you click the **OK** button, the subscriber account then is created.

Subscriber Settings

[Monitor Option]

- **Image Size:** Sets the video size from the subscriber. The following chart tells how the image size set at the subscriber corresponds to different settings at Center V2. For example, if Center V2 wants to receive 720 X 240 image, the subscriber must set the video resolution to 720 x 480 or 720 x 240.

Subscriber / Center V2	**640 x 480**	**640 x 240**	**320 x 240**	**720 x 480**	**720 x 240**	**720 x 576**
Normal	320 x 240	320 x 240	320 x 240	360 x 240	360 x 240	360 x 288
Middle	640 x 240	640 x 240	320 x 240	720 x 240	720 x 240	720 x 288
Large	640 x 480	640 x 240	320 x 240	720 x 480	720 x 240	720 x 576

- **Auto Record Video:** Center V2 automatically records events based on the following Record Mode.

[Record Mode]

- **Live Mode:** Streams live video to Center V2. Make sure you have enough bandwidth to receive video in live. To set the maximum time of a video clip to be sent to Center V2, click the **Settings…** button. The more the set minutes, the bigger the file size; and therefore more time is required to send the file over Internet.
- **Attachment Mode:** A defined time of event will be recorded before sending to Center V2. The attachment will be sent out immediately once your subscriber is connected to Center V2.
  The Attachment Mode also provides several options associated with the attachment. Click the **Settings…** button to bring up the Record Settings – Attachment Mode dialog box. See *Attachment Mode Settings* below for further setup.
- **Both (Live & Attachment):** Sends both live and attachment file.

Attachment Mode Settings

In the Subscriber Settings dialog box (see Figure 9-4), select **Attachment Mode**, and click the **Settings…** button beside. This dialog box appears.

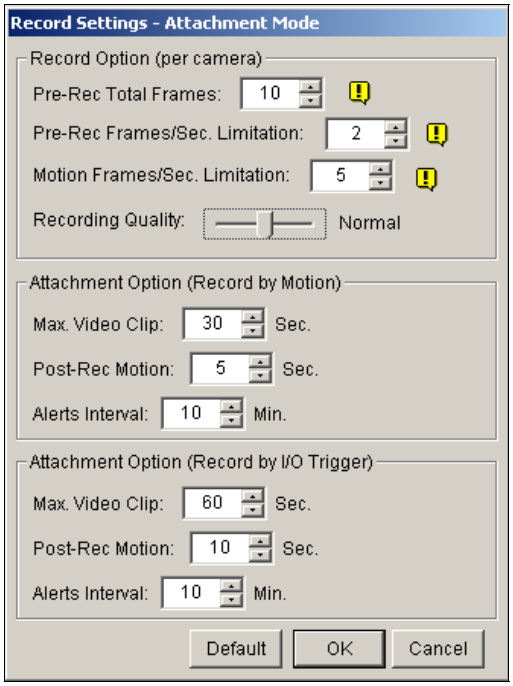


Figure 9-5 *Recording Setting*

[Record Options (per camera)]

- **Pre-Rec Total Frames:** Determines the total pre-recorded frames in a video attachment.
- **Pre-Rec Frames/sec Limitation:** Determines the frame rate in the pre-recorded period.

Note: Dividing the Pre-Rec Total Frames by Pre-Rec Frames/Sec Limitation, you will get total time of the video attachment.

- **Motion Frames/sec Limitation:** Determines the frame rate of the video to be sent as an attachment.
- **Recording Quality:** Use the slider bar to adjust the video quality in 3 levels.

[Attachment option (Record by Motion)] Defines the duration of the video attachment delivered upon motion.

- **Max video Clip:** Determines the duration of the video attachment.
- **Pos-Rec Motion:** Determines how many more seconds of video to be sent when motion stops.
- **Alerts interval:** Determines the interval between sent motion events

[Attachment option (Record by I/O trigger)] Defines the duration of the video attachment delivered upon I/O trigger.

Creating a Subscriber Schedule

The Center V2 operator can create schedules to monitor subscription status. When subscribers don't log in Center V2 on the programmed time, the operator and subscribers will get notified.

- When a subscriber doesn't log in Center V2 on time, this message will appear on the Event List: *Subscriber session is not established. Wait-Time expired*.
  When a subscriber logs out suddenly during a service time, this message will appear: *Unexpected logout before subscriber session is completed*.

- To activate the computer and output alarm to notify the operator while a SMS and E-mail message being sent out to a subscriber, use the **Notification** feature. For details, see *Notification Settings* later in this chapter.

To set up a schedule

1. On the Center V2 window, click the **Accounts** button (No. 12, Figure 9-1) to display the Address Book window.
2. Highlight one subscriber, and click the **Subscriber Schedule** (No. 7, Figure 9-2) to display the Schedule window.

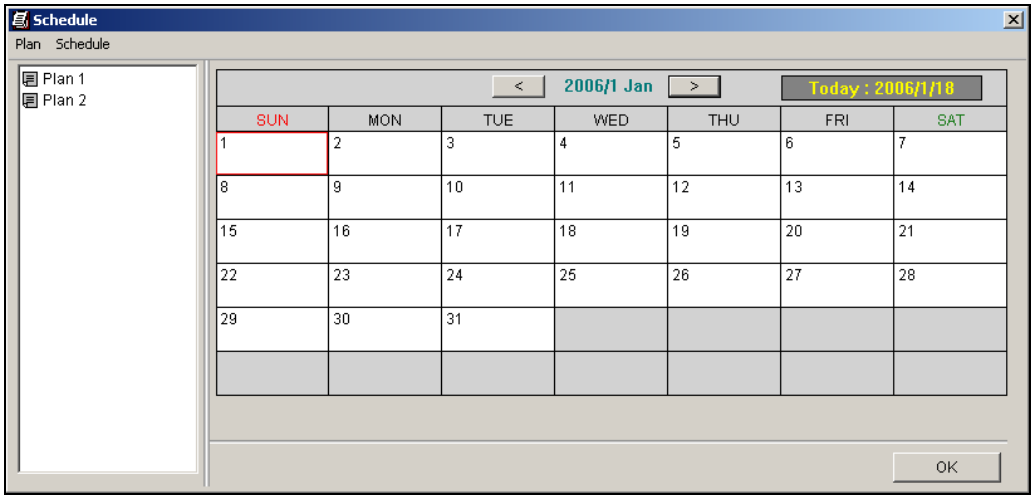


Figure 9-6

3. On the Schedule window menu, select **Setup Wizard** and follow the Wizard instructions.
4. When the following window appears during the instructions, drag the mouse over the Login timeline to define the Start and End time.

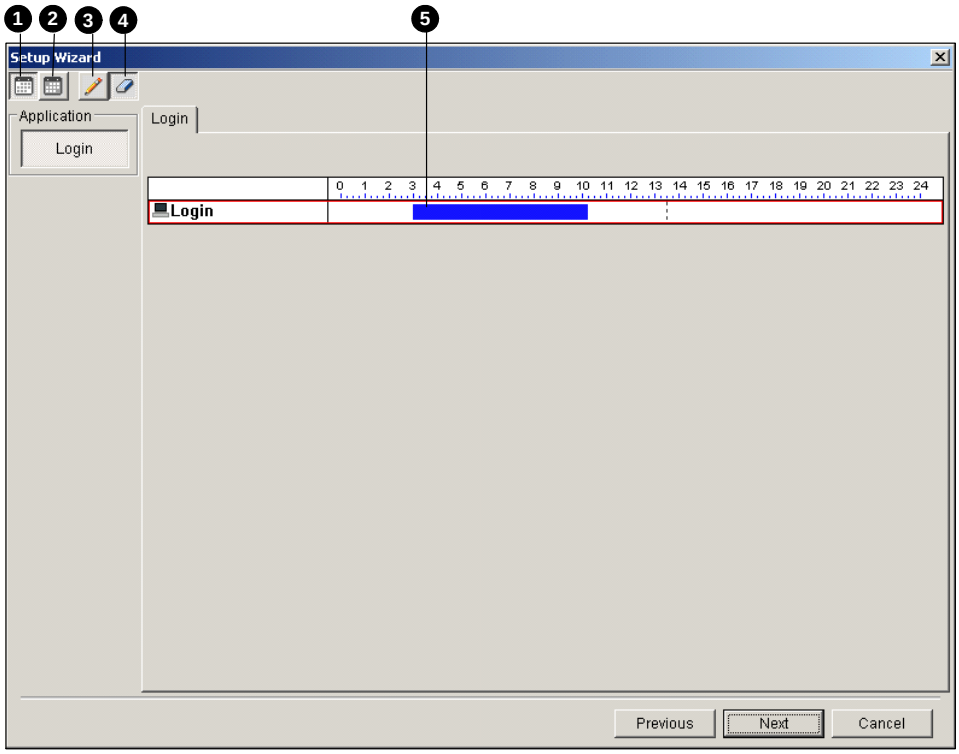


Figure 9-7

The controls on the Setup Wizard:

No.	Name	Description
1	Include	Displays task time.
2	Exclude	Displays non-task time.
3	Add	Draws task time.
4	Erase	Erase task time.
5	Login	Timeline.

5. Click **Next** when you finish the schedule. The Setup Wizard dialog boxes pops up again, and then click **Finish** to exit.

Configuring Center V2

On the Center V2 window, click the **Preference Settings** button (No. 10, Figure 9-1), and select **System Configure** to display the following Preference window. This window contains these tabs: (1) General, (2) Layout, (3) Network, (4) Record and (5) Dispatch Server.

[General]

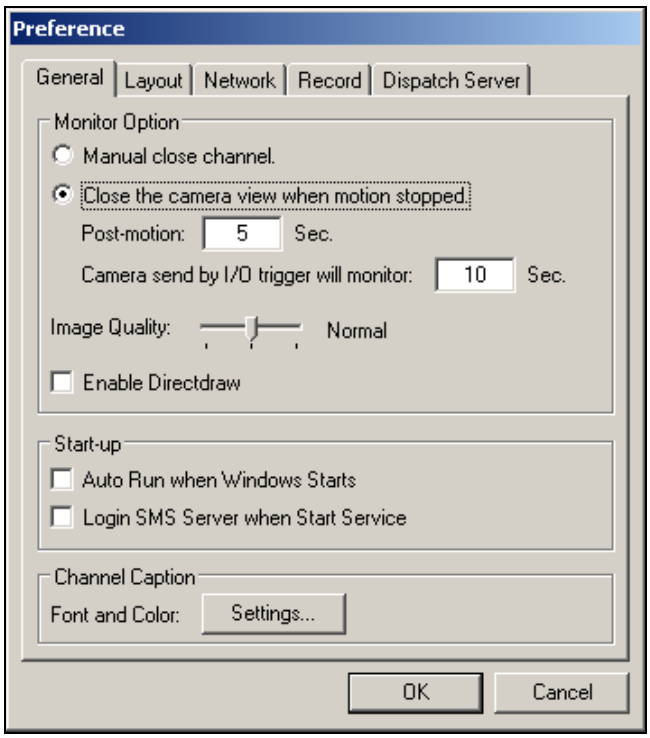


Figure 9-8 *Preference- General Settings*

[Monitor Option]

- **Manual close channel:** Closes the triggered camera view manually.
- Close the camera view when motion stopped: Closes the triggered camera view automatically when motion stops.

  Post Motion: Specifies the duration of the camera view remaining on the monitoring window after motion stops.

  Camera send by I/O trigger will monitor: Specifies the duration of the camera view remaining on the monitoring window when an I/O device is triggered.
- **Image Quality:** Adjusts the video quality. Moving the slide bar to the right side for the better quality and the bigger image size.
- **Enable Direcdraw:** Enables an enhanced image performance for live video.

[Start-up]

- **Auto Run when Windows Starts:** Automatically runs Center V2 when Windows starts.
- **Login SMS Server when Start Service:** Automatically logs in SMS Server when Center V2 starts. You will be prompted to enter the IP address, Port, ID and Password of the SMS server.

[Channel Caption]

- **Font and Color:** Click the **Settings….** button to change the font and color of the captions.

[Layout]

This function transfers the Event List window to a separate computer while the monitoring windows are displayed in the current computer. For the application, your VGA card must support Twin View (discussed in Chapter 11), and your Windows desktop must be properly set up for the display across two computer monitors.

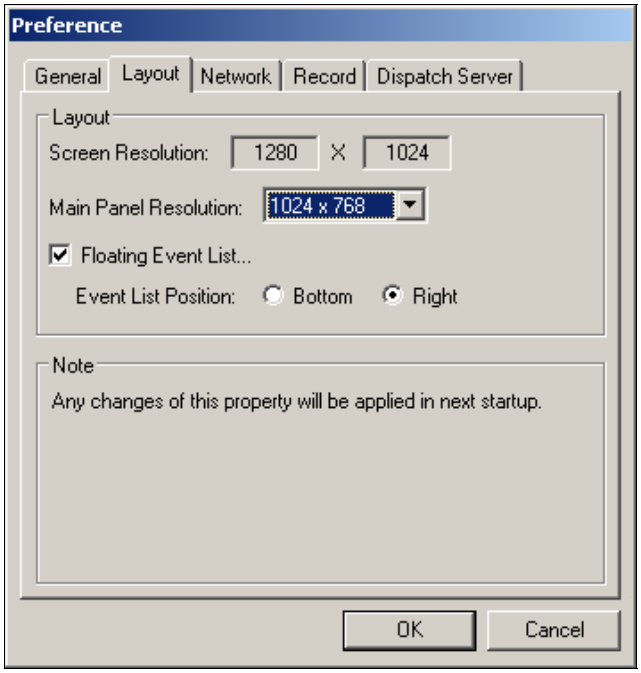


Figure 9-9 *Preference-Layout*

- **Screen Resolution:** Detects the current screen resolution on your PC.
- **Main Panel Resolution:** Sets the Center V2 panel resolution to 1024 x768 or 1280 x1024. This function is only available when your PC screen resolution is higher than 1280 x 1024.
- **Floating Event List:** Moves the Event List window to a separate monitor at the bottom or right side.

[Network]

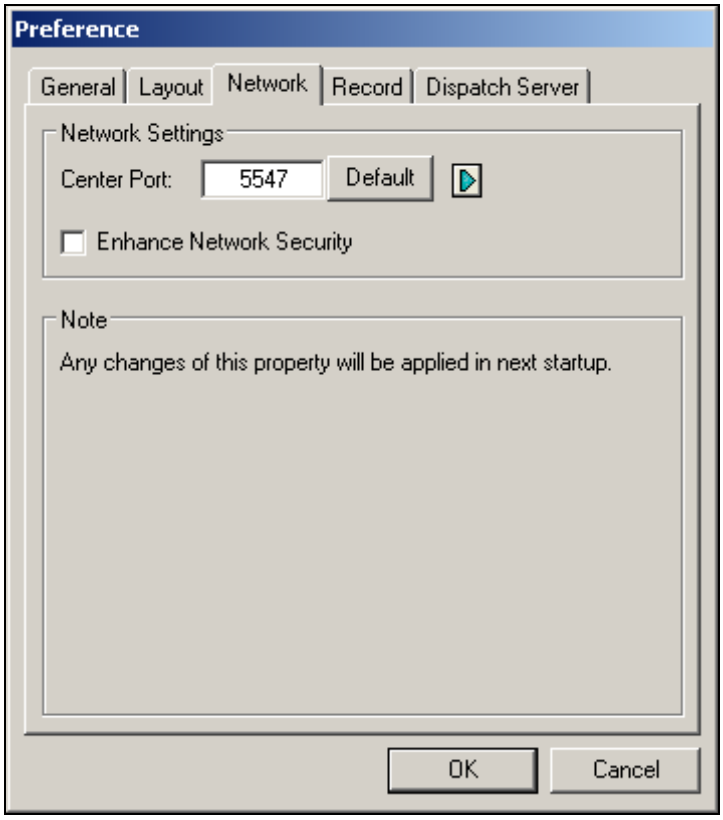


Figure 9-10 *Preference- Network Settings*

- **Center Port:** Indicates the communication port used by the Center V2. To automatically configure the port on your router by UPnP technology, click the **Arrow** button. For details, see *UPnP Settings*, Chapter 6 in the *User's Manual*.
- **Enhance Network Security:** Applies enhanced security for Internet. Note when the feature is enabled, all subscribers using earlier version than version 7.0 cannot access the Center V2 anymore.

[Record]

The feature allows you to assign a path to store video files.

Click the **Add New Path** button to assign a path; click the **[X]** button to delete a path.

If the Recycle item is checked, the system will delete old files when storage space falls short of 800MB; if not checked, Center V2 will stop recording when storage space falls short of 800MB.

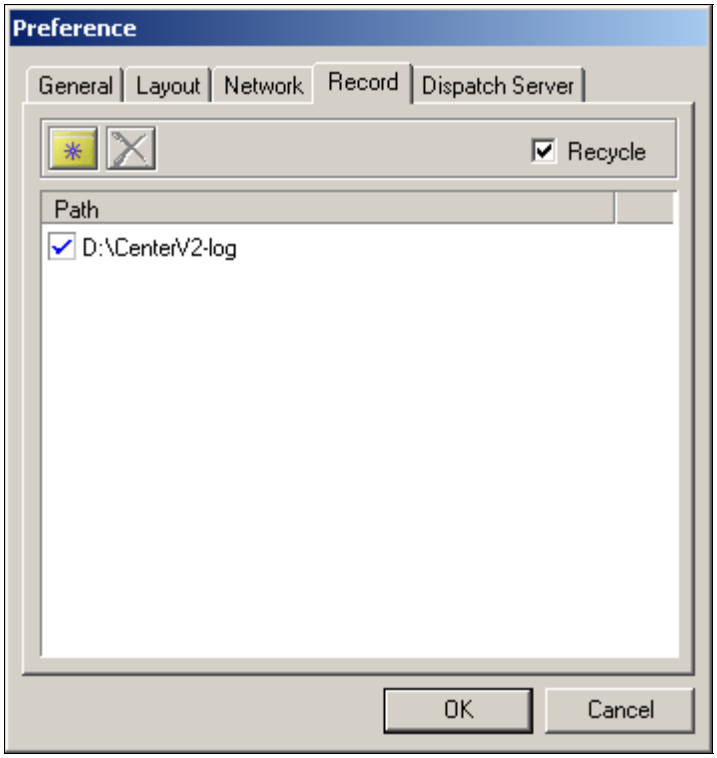


Figure 9-11 *Preference-Record*

Note: Every time when the Recycle function is activated, the files of 400MB will be deleted.

Connecting to Center V2

To configure the GV-System in order to access the Center V2 remotely through a network connection, follow these steps:

1. In the Main System, click the **Network** button, and select **Connect to Center V2**. This dialog box appears.

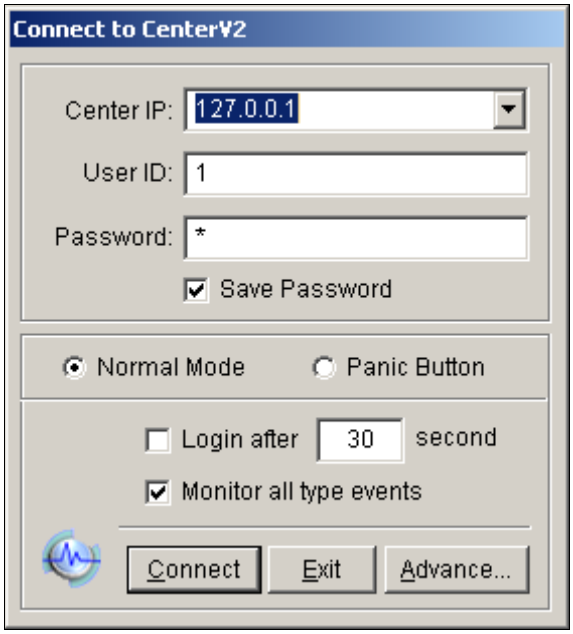


Figure 9-12 *Connect to Center V2*

2. Enter the IP address of the Center V2, the user ID and password created in Center V2. See *Creating a Subscriber's Account* earlier in this chapter.
3. Click the **Connect** button. When the connection is established, Center V2 will start receiving videos or attachments from the subscriber.

Normal Mode Setup

To further define the communication conditions between the subscriber and Center V2, select **Normal Mode** on the Connect to Center V2 dialog box (Figure 9-12), and then click the **Advance** button for setup. The setup window includes these tabs: (1) General, (2) Camera, (3) Other and (4) I/O Device.

[General]

The settings define the retry modes and communication ports between GV-System and Center V2.

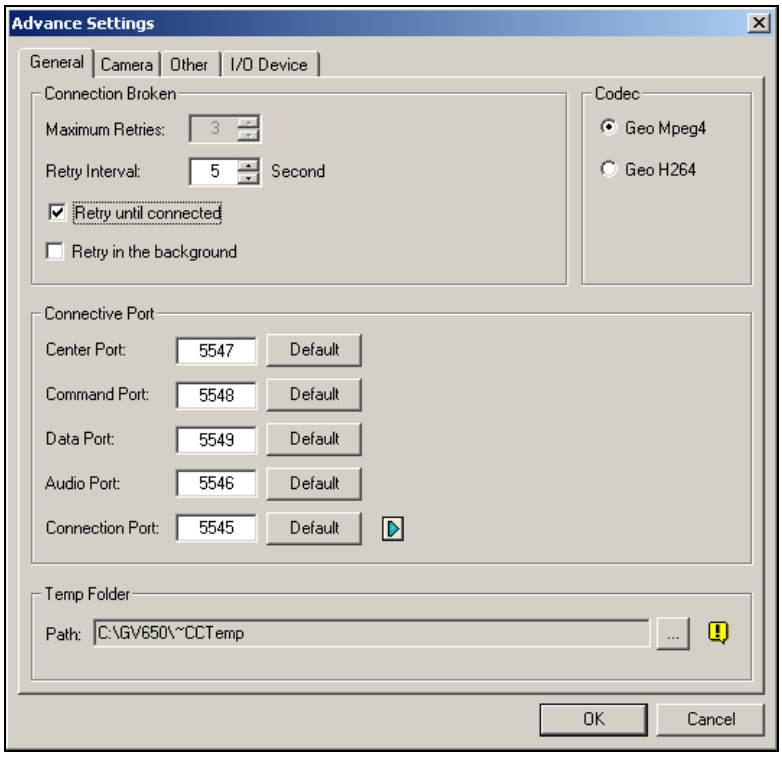


Figure 9-13 *Advance Settings*

[Connection Broken]

- **Maximum Retries:** Sets the number of retries if connection is not immediately available.
- **Retry Interval**: Sets the time interval between each retries.
- **Retry until connected:** Keeps GV-System on trying until connected to Center V2.
- **Retry in the background:** Hides the retries in the background.

[Codec] Selects **Geo Mpeg 4** (default) or **Geo H.264** as the compression method for video sent to Center V2. For details, see *Recording Codec Options* in Chapter 1

[Connective Port] Displays ports used for communication. It is recommended to keep the default settings, unless otherwise necessary. The Center Port number must match the Center Port assigned in Center V2, as shown in Figure 9-10.

To automatically configure these ports on your router by UPnp technology, click the **Arrow** button. For details, see *UPnP Settings* in Chapter 5.

[Temp Folder] Attachments are temporarily stored in this folder while waiting to be sent to Center V2. In case the connection is broken, attachments meant to be sent to Center V2 could be found here. Once the connection is back to normal, events saved in the Temp Folder will be sent out immediately.

[Camera]

The settings define which camera condition to notify Center V2. To configure the event type, first disable the **Monitoring all type events** option in Figure 9-12.

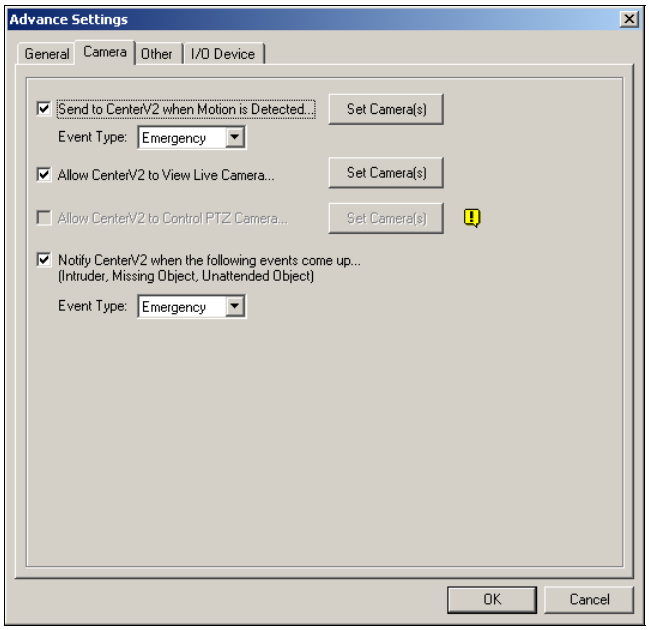


Figure 9-14 *Advanced Settings- Camera*

- **Send to Center V2 when Motion is Detected:** Sends the video to Center V2 when motion is detected. Click the **Set Camera(s)** button to assign cameras for the application.
  Event Type: If the subscriber wants Center V2 always to get notified of motion detection, select **Emergency**. If the subscriber wants Center V2 to get notified of motion detection only when an assigned input is triggered, select **Normal**.

- **Allow Center V2 to View Live Camera:** Gives Center V2 the privilege to view your cameras at any time. Click the **Set Camera(s)** button to assign cameras for the application.

- **Allow Center V2 to Control PTZ Camera:** Gives Center V2 the privilege to control your PTZ camera. Remember to properly set up camera mapping first. See *Mapping PTZ Cameras* in Chapter 1.

- **Notify Center V2 when the following events come up:** Notifies Center V2 when any of these alert events occur: Intruder, Missing Object, Unattended Object and Scene Change.
  Event Type: If the subscriber wants Center V2 always to get notified of these alert events, select **Emergency**. If the subscriber wants Center V2 to get notified of these alert events only when an assigned input is triggered, select **Normal**.

Note: To set an input trigger for the notification of **Normal** events, see *Security Service, [I/O Device]* later in this chapter.

[Other]

Define other communication conditions between GV-System and Center V2.

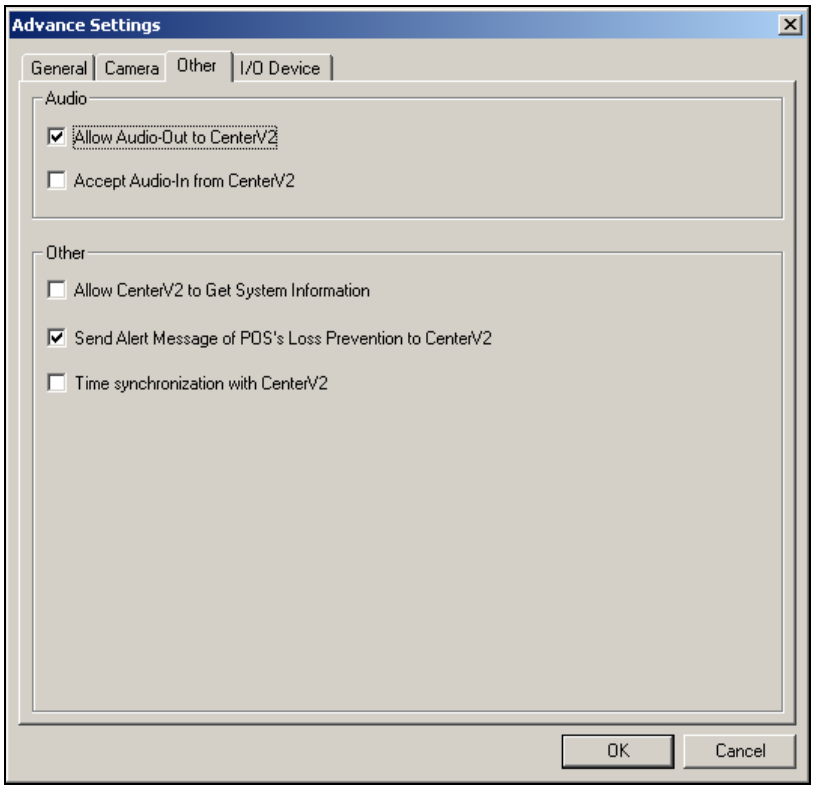


Figure 9-15 *Advanced Settings- Other*

[Audio] Appling any of these options here may generate privacy issues. Think before you make any selection.

- **Allow Audio-Out to CenterV2:** Allows Center V2 to listen to the audio from GV-System.
- **Accept Audio-In from CenterV2:** Allows CenterV2 to use the talkback feature when emergency occurs.

[Other]

- **Allow Center V2 to Get System Information:** Allows Center V2 to get system information on your GV-System.
- **Send Alert Message of POS's Loss Prevention to Center V2:** Notifies Center V2 about the events of POS Loss Prevention.
- **Time synchronization with Center V2:** Enables the time increment/decrement of minutes and seconds at the subscriber site to match the time at the Center V2.

[I/O Device]

The settings define which I/O condition to notify Center V2. To configure these settings, first disable the **Monitoring all type events** option in Figure 9-12.

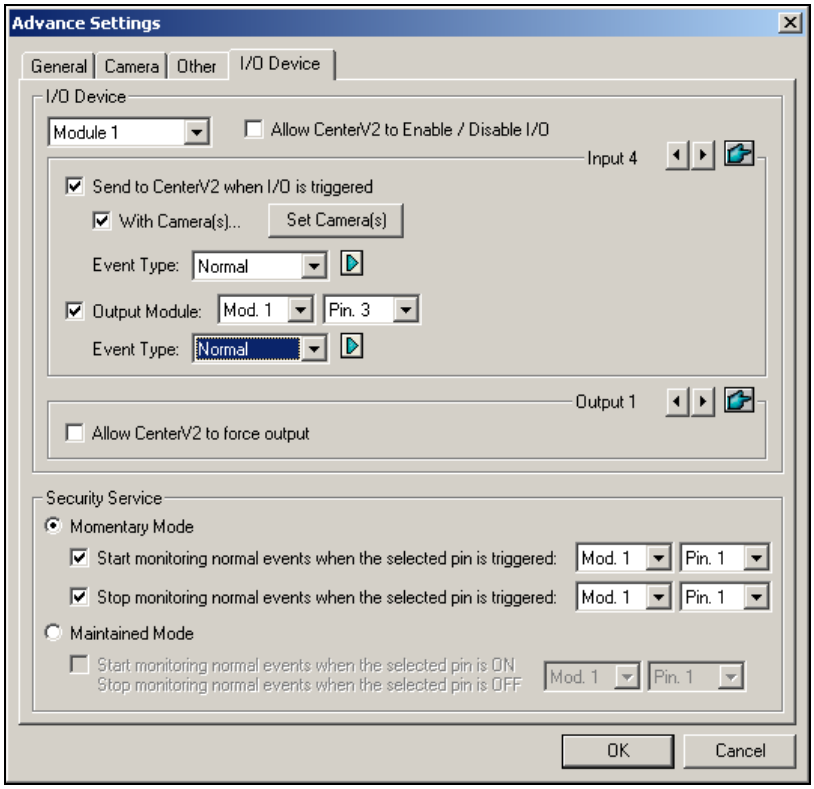


Figure 9-16 *Advanced Settings- I/O Device*

[I/O Device] Notifies the Center V2 when I/O devices are triggered. Use the **Arrow** buttons to configure each I/O device, or click the **Finger** button to apply to all I/O devices.

- **Allow Center V2 to Enable / Disable I/O:** Allows Center V2 manually arm/disarm any I/O devices at the subscriber's site without interrupting the monitoring.
  For example, when an alarm is triggered at the subscriber site, the Center V2 operator can turn it off remotely before arriving at the site. Meanwhile, GV-System still remains on monitoring.

- **Send to Center V2 when I/O is Triggered:** Notifies Center V2 when any selected input is triggered.

  With Camera(s): Sends the camera video to Center V2 when the selected input is triggered. Click the **Set Camera(s)** button to assign cameras for the application.

  Event Type: If the subscriber wants Center V2 always to get notified of the input trigger, select **Emergency**. If the subscriber wants Center V2 to get notified of the input trigger only when an assigned input is triggered, select **Normal**.

Right Arrow button: Sets the delay time to notify Center V2 of input trigger. This feature is only available when the **Normal** type is chosen.

- ⊙ **Exit Delay:** While the system is activated, this feature provides an interval of time for the subscriber to exit the premises. During this time, the specified input (e.g. a exit/entry door) is inactive. Once the exit delay expires, the input will be fully armed.
- ⊙ **Entry Delay:** While the system is activated, this feature provides an interval of time for the subscriber to entry the premises. During this time, the specified input (e.g. a exit/entry door) is inactive so that the subscriber can disarm the system. If the subscriber fails to do, once the entry delay expires, Center V2 will get notified of the input trigger.

- **Output Module:** Enables the assigned output module when the selected input module is triggered.

  For this example, when the I/O Device (Module 1, Input 4) is triggered, the Output (Module 1, Pin 3) will be activated simultaneously.

  Right Arrow button: Sets the delay time to trigger the assigned output module.

  Event Type: If the subscriber wants Center V2 always to get notified of the output trigger, select **Emergency**. If the subscriber wants Center V2 to get notified of the output trigger only when an assigned input is triggered, select **Normal**.

Note:

1. To set an input trigger for the notification of **Normal** events, see *[Security Service]* below.
2. The delay settings in **Send to Center V2 when I/O is triggered** and **Output Module** allow you to enter your premises and disable input/output module before it is activated.
   To disable prior I/O settings, the subscriber may exit the connection to Center V2 or use the **Stop monitor normal event when selected pin is Triggered** feature in Figure 9-16.

- **Allow Center V2 to Force Output:** Allows Center V2 to manually force output devices installed at the subscriber's site.

[Security Service] Supports two types of access control systems: Momentary and Maintained Mode.

- **Momentary Mode:** Pushbutton switches that are normally open and stay closed only as long as the button is pressed. Momentary switches allow turn-on or turn-off from multiple locations.
  For example, certain premises have a designated entry/exit door. When the staff enters the entry door, the system starts monitoring. When the staff leaves from the exit door, the system stops monitoring.

- **Maintained Mode:** Push-on/push off button switches that stay open until thrown, and then stay closed until thrown again. Maintained switches are convenient for only one switch location. For example, in the business hour when the door is opened, the system stops monitoring; in the non-business hour when the door is closed, the system starts monitoring.

Panic Button Setup

You may set up a panic alarm button at your GV-System. In case of emergency, press the button immediately to send the associated video to Center V2. To set up a panic alarm, select **Panic Button** in the Connect to Center V2 dialog box (Figure 9-12), and click the **Advance** button. This dialog box appears.

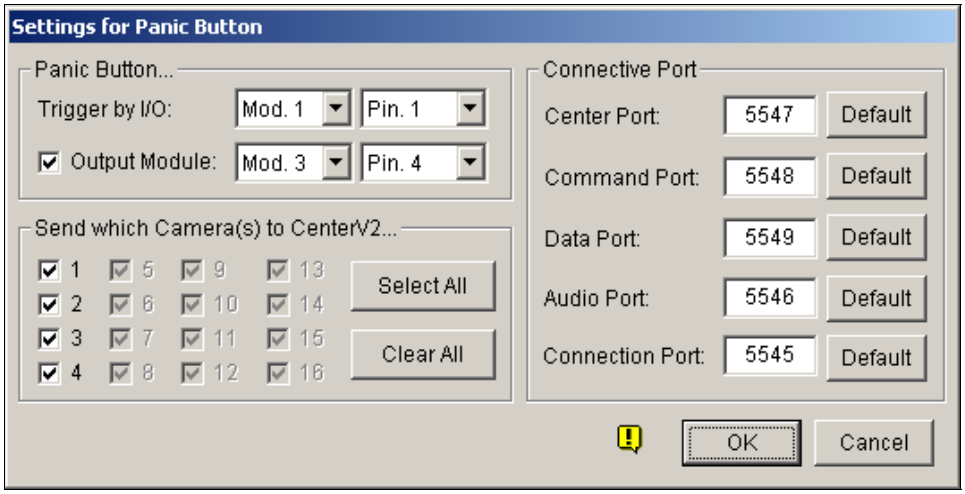


Figure 9-17 *Settings for Panic Button*

[Panic Button] Assigns an installed input device to be the panic alarm button.

- **Trigger by I/O:** Assigns an input module and a pin number.
- **Output Module:** Enables an assigned output module when the panic button is pressed. For this example, when the panic button (Module 1, Pin 1) is pressed, the output module (Module 3, Pin 4) will be triggered simultaneously.

[Send which Camera(s) to Center V2] Select which camera video should be sent to Center V2 when the panic alarm button is pressed.

[Connective Port] The communication ports used by Center V2. It is recommended to keep all defaults, unless otherwise necessary.

Detecting Input Status

The feature is designed to monitor all inputs for a change of state whenever the subscriber starts the Center V2 monitoring. A change from the previously defined state (N/O to N/C or N/C to N/O) will activate an alarm condition.

Click on the Connect to Center V2 dialog box (Figure 9-12). For details, see *Detecting Input Status* in Chapter 2.

Event Log Browser

The Event Log Browser allows you to locate a desired event coming from subscribers. On the Center V2 window, click the **Event List** button (No. 5, Figure 9-1) and select **View Event Log** to display the following window.

Tip: You can quickly access the Event Log of a specific subscriber, instead of filtering all events. Right-click one subscriber on the Subscriber list (No. 4, Figure 9-1), select **Event Log** and then click a desired log type.

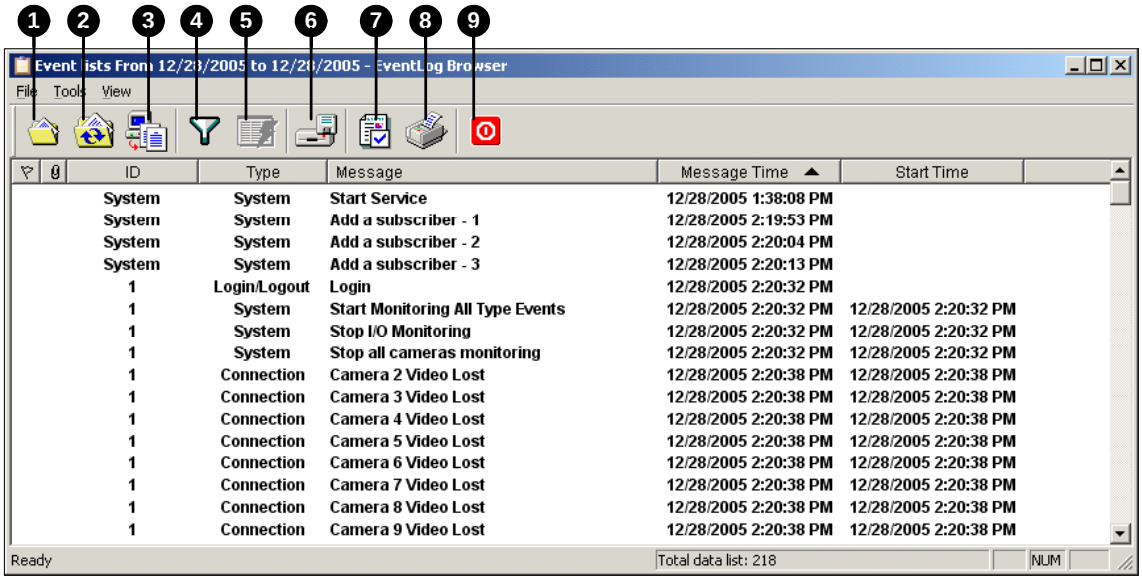

1
2
3
4
5
6
7
8
9
File Tools View
ID Type Message Message Time Start Time
System System Start Service 12/28/2005 1:38:08 PM
System System Add a subscriber - 1 12/28/2005 2:19:53 PM
System System Add a subscriber - 2 12/28/2005 2:20:04 PM
System System Add a subscriber - 3 12/28/2005 2:20:13 PM
1 Login/Logout Login 12/28/2005 2:20:32 PM
1 System Start Monitoring All Type Events 12/28/2005 2:20:32 PM 12/28/2005 2:20:32 PM
1 System Stop I/O Monitoring 12/28/2005 2:20:32 PM 12/28/2005 2:20:32 PM
1 System Stop all cameras monitoring 12/28/2005 2:20:32 PM 12/28/2005 2:20:32 PM
1 Connection Camera 2 Video Lost 12/28/2005 2:20:38 PM 12/28/2005 2:20:38 PM
1 Connection Camera 3 Video Lost 12/28/2005 2:20:38 PM 12/28/2005 2:20:38 PM
1 Connection Camera 4 Video Lost 12/28/2005 2:20:38 PM 12/28/2005 2:20:38 PM
1 Connection Camera 5 Video Lost 12/28/2005 2:20:38 PM 12/28/2005 2:20:38 PM
1 Connection Camera 6 Video Lost 12/28/2005 2:20:38 PM 12/28/2005 2:20:38 PM
1 Connection Camera 7 Video Lost 12/28/2005 2:20:38 PM 12/28/2005 2:20:38 PM
1 Connection Camera 8 Video Lost 12/28/2005 2:20:38 PM 12/28/2005 2:20:38 PM
1 Connection Camera 9 Video Lost 12/28/2005 2:20:38 PM 12/28/2005 2:20:38 PM
Ready
Total data list: 218
NUM

Figure 9-18 *Event Log Broswer*

The buttons on the Event Log Browser:

No.	Name	Description
1	Open	Opens an event log.
2	Reload	Refreshes the event log manually
3	Start/Stop Synchronous EventLog	Refreshes the event log automatically.
4	Filter	Defines the search criteria.
5	Refresh the Filter Result	Refreshes the filter result.
6	Backup	Exports the current event list and video files.
7	Page Setup	Creates header and footer on the printout of Event Log.
8	Print	Prints the current event list.
9	Exit	Exits the browser.

Opening the Event Log

Click the **Open** button (No. 1, Figure 9-18) to launch the following Open DataBase dialog box. Define a time period, select the type of log, and click **OK** for search. Events matching the search criteria will be loaded to the Event Log Browser window.

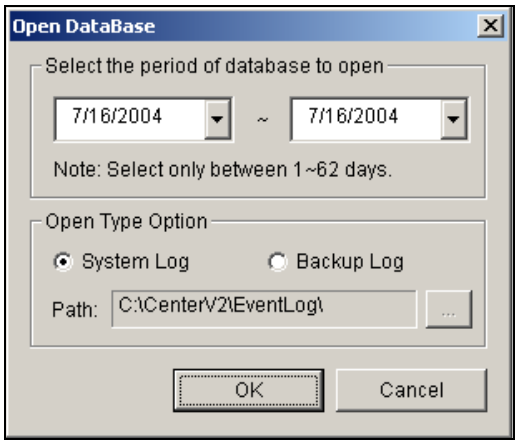


Figure 9-19 *Open Database*

Filtering the Event Log

Click the **Filter** button (No. 4, Figure 9-18) to bring up the following Eventlog -- Filter window. This option allows you to perform a search based on criteria.

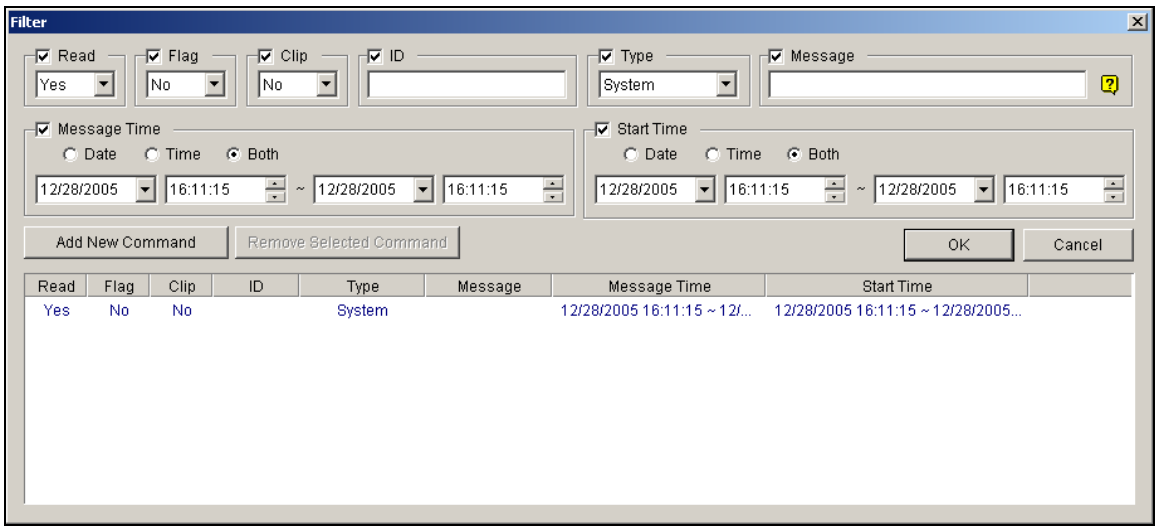


Figure 9-20 *Eventlog-Filter*

Filters

- **Read:** Searches the events read in Center V2.
- **Flag:** Searches the events flagged important.
- **Clip:** Searches the events containing video attachments.
- **ID:** Searches the events from a specific subscriber.
- **Type:** Searches the events based on the nature of events.
- **Message:** Searches the events by keywords.
- **Message Time:** Searches the events by the arriving time or date to Center V2.
- **Start Time:** Searches by the starting time of the events occurred at the subscriber site.

Applying Multiple Filters

This option allows you to define several filter commands for search. Click the **Add New Command** button to add a new filter command. When you click **OK**, all events matching the defined commands will be listed on the Event Log Browser.

Removing Filters

Select the filter command you wish to remove from the filter list, and then click the **Remove Selected Command** button to remove it.

Event Log Settings

On the Center V2 window, click the **Event List** button (No. 5, Figure 9-1), and select **Event Log Setting** to display the following dialog box:

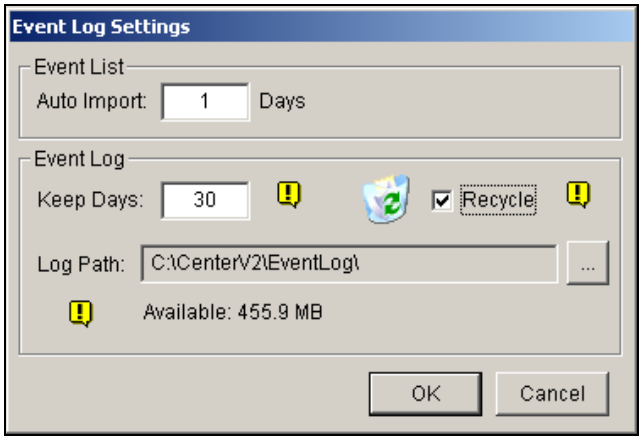


Figure 9-21 *Event Log Settings*

[Event List]

- **Auto Import**: Specify the number of days to be loaded when Event Log Browser is launched.

[Event Log]

- Keep Days: Enter the number of days to keep log files.
- **Recycle:** Delete the files of the oldest day when storage space is lower than 500MB.
- Log Path: Click the **[...]** button to assign a storage path.

Page Setup

You can create the Footer and Header on the printout of Event Log.

1. On the Event Log Browser, click the **Page Setup** button (No. 7, Figure 9-18) to display this dialog box.
2. Check the items and type the information you want to print out.
3. Click **OK** to apply the settings.

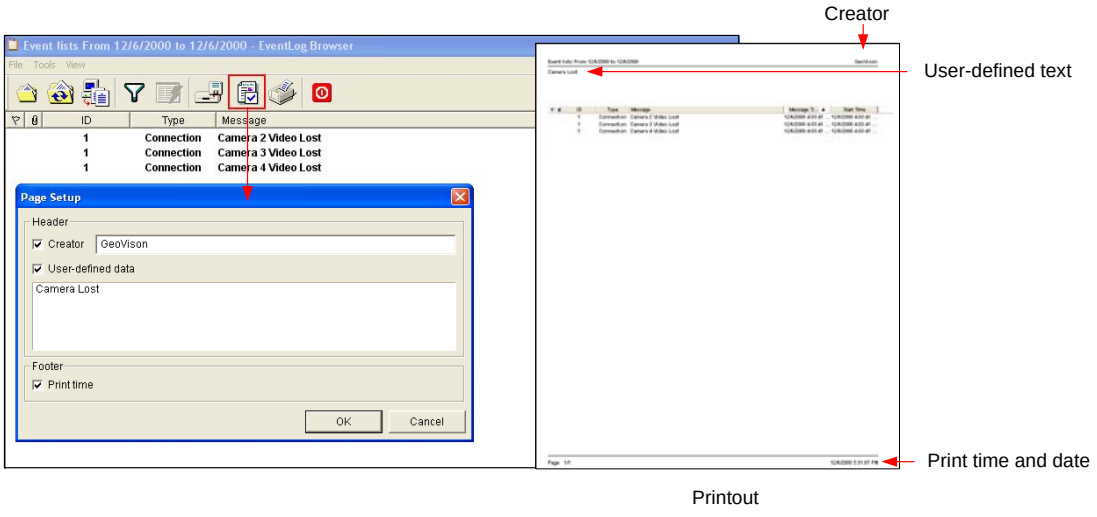


Figure 9-22

Monitoring and Managing Subscribers

This section describes how to monitor and manage subscribers in these parts: (1) Showing I/O Status, (2) I/O Activation (3) Camera/Audio Control, (4) Camera Monitor (5) Viewing Subscriber Information and (6) Subscription Service Options.

Showing I/O Status

You can view the status of input devices at the subscriber's site, as well as forcing the outputs.

On the Subscriber List (No. 4, Figure 9-1), right-click one online subscriber, and then select **Show I/O status** to display this window.

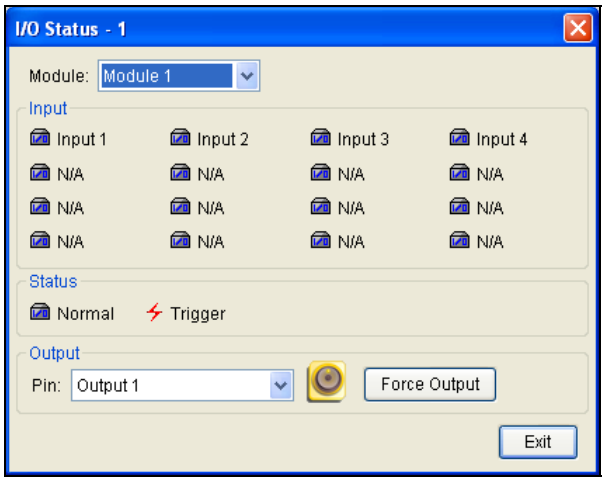


Figure 9-23

[Module] Select a module from the drop-down list.

[Input] Indicates the status of input devices of the selected module. The blue icon means the input is deactivated; the red lightening icon means the input is activated.

[Output] To force an output installed at the subscriber site, select a desired output pin from the drop-down list and then click the **Force Output** button.

For this, the subscriber must grant the privilege to Center V2 first. See the **Allow Center V2 to Force Output** option in Figure 9-16.

I/O Enable Setting

The Center V2 operator can manually arm or disarm any I/O devices of subscribers without interrupting the monitoring. For this, the subscriber must give the privilege first. See the **Allow Center V2 to Enable/Disable I/O** option in Figure 9-16.

To arm or disarm I/O devices

1. On the Subscriber List (No. 4, Figure 9-1), right-click one online subscriber and select **I/O Enable Setting**.
2. Check the Input/Output to arm or uncheck the Input/Output to disarm the device(s).

Camera/Audio Control

This feature allows two-way audio communication between CenterV2 and the subscriber, as well as PTZ control.

On the Subscriber List (No. 4, Figure 9-1), right-click one online subscriber and then select **Camera/Audio Control** to display this window. Click the **Play** button to start the application.

Figure 9-24

The controls on the Camera/Audio Control:

No.	Name	Description
1	Close	Closes the Control window.
2	Play	Plays live video.
3	Stop	Stops playing video.
4	Microphone	Enables speaking to the subscriber. The subscriber must grant the privilege first. See the **Allow Audio-Out to Center V2** option in Figure 9-15.
5	Speaker	Enables live audio from the subscriber. The subscriber must grant the privilege first. See the **Accept Audio-In from Center V2** option in Figure 9-15.
6	Change Camera	Switches camera channels.
7	PTZ Control Panel	Controls PTZ camera remotely.

Camera Monitor

Use the Camera Monitor window to define the following:

- Enable and disable live display
  (The subscriber must give the privilege first. See the **Allow Center V2 to View Live Camera** option in Figure 9-14)
- Define the interval between incoming events triggered by motion detection and video lost

1. On the Subscriber List (No. 4 in Figure 9-1), right-click one online subscriber and select **Camera Monitor**.
2. The Camera Monitor window appears.

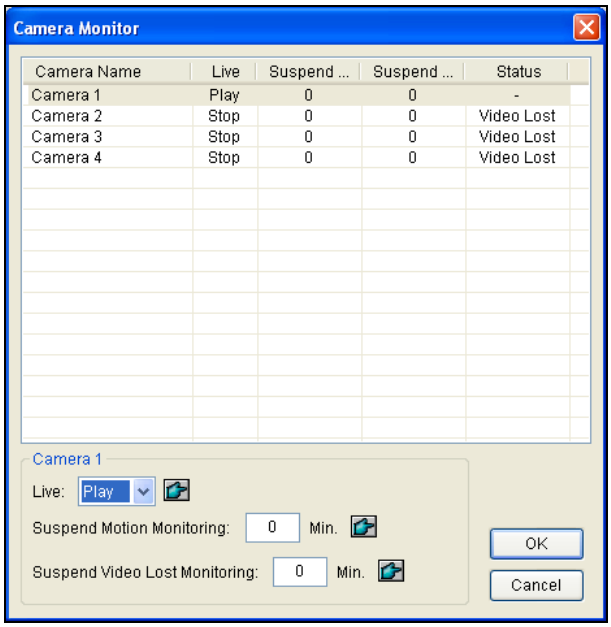


Figure 9-25

- **Live drop-down list:** Highlight one camera, and select **Play** (enable live display) or **Stop** (disable live video).
- **Suspended Motion Monitoring:** Highlight one camera, and set the interval between incoming events triggered by motion detection. Alternatively, you can right-click one live camera channel on the monitoring window and select **Suspend** for the same setting.
- **Suspend Video Lost Monitoring:** Highlight one camera, and set the interval between incoming events triggered by video lost.
- **Status column:** Displays the status of video lost from cameras or disconnection.

3. Click **OK** to apply the settings.

If the camera is enabled for live display, you will see in the upper right corner of its monitoring window; otherwise, you will see .

Viewing Subscriber Information

To view the general information about your subscribers, click the **Host Information** button (No. 9, Figure 9-1) on the Center V2 window to display the Host Information window. Choose a subscriber from the list, and click the **View Information…** button to view its related information.

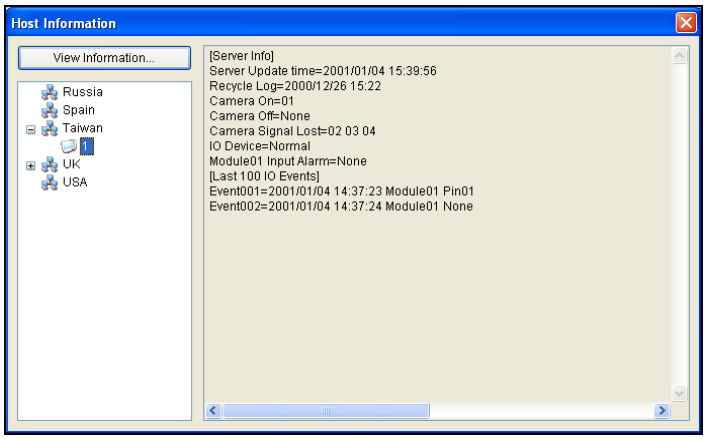


Figure 9-26

Subscription Control

The Center V2 operator can disable its services to an individual subscriber when subscription expires. On the Address Book (Figure 9-2), right-click one subscriber and select **Disable**. To restore the subscription, right-click again to select **Enable**.

Output Alerts

When alert conditions occur, you can activate the output devices installed either at the Center V2 site or at the subscriber site.

Forcing Outputs of Center V2

To configure output devices at the Center V2 site, click the **I/O Device** button (No. 7, Figure 9-1) on the Center V2 window and then select **I/O Device** from the menu. Currently the application only supports GV-IO modules. For setup details, see *Setting Up I/O Devices,* Chapter 2 on the Surveillance System Software CD.

To automatically force outputs when alert conditions occur, see *Notification Settings* later in this chapter.

To manually force outputs, click the **I/O Device** button (No. 7, Figure 9-1) on the Center V2 window, and then select **Force Output** to display the Force Output of Local I/O Device window. Select a desired module and then click **Finger** buttons to activate outputs.

Forcing Outputs of a Subscriber

See *Showing I/O Status* earlier in this chapter.

Notification Settings

Center V2 can automatically activate the assigned computer and output alarm to notify the operator while a SMS and e-mail message being sent out to subscribers, when alert conditions occur. For this application, click the **Preference Settings** button (No. 10, Figure 9-1) on the Center V2 window and select **Notification** to display this window.

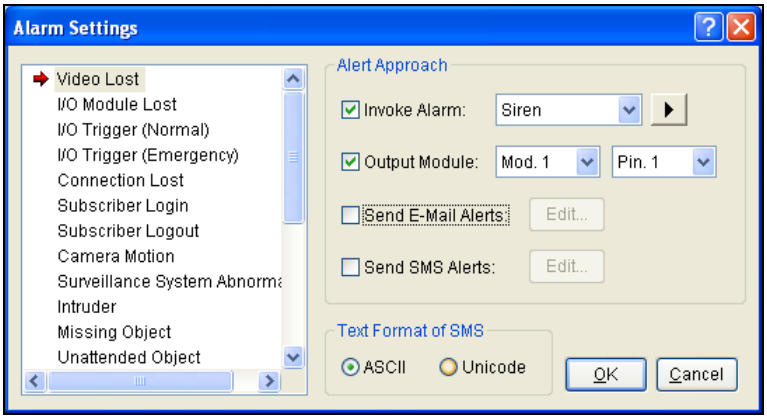


Figure 9-27

[List box] Select an alert condition for configuration. The alert conditions include: (1) Video Lost, (2) I/O Module Lost, (3) I/O Trigger (Normal), (4) Trigger (Emergency), (5) Connection Lost, (6) Subscriber Login, (7) Subscriber Logout, (8) Camera Motion, (9) Surveillance System Abnormality, (10) Intruder, (11) Missing Object, (12) Unattended Object, (13) Scene Change, (14) POS Loss Prevention, (15) Disk Full, (16) Stop all camera monitoring, (17) Stop I/O Monitoring, (18) Start Monitoring All Type Events, (19) Stop Monitoring All Type Events, (20) Wait-Time Expired and (21) Unexpected Logout.

[Alert Approach]

- **Invoke Alarm:** Select a computer alarm from the drop-drown list. Or, select **User Define** from the list to import one desired .wav sound. Click the **Arrow** button beside to test the assigned alarm.
- **Output Module:** Select an installed output model and pin number to alert the Center V2 operator.
- **Send E-Mail Alerts:** Enables e-mail alerts to send e-mails to subscribers. Click the Edit button to edit a message. For E-Mail settings, see *E-Mail Alerts later* in this chapter.
- **Send SMS Alerts:** Enables SMS alerts to send SMS messages to subscribers. Click the **Edit** button to edit a message. For SMS Server settings, see *SMS Alerts* later in this chapter.

[Text Format of SMS] ASCII for English text, limited to 160 characters. Unicode for other languages, limited to 70 characters.

Note: For E-mail and SMS alerts, ensure to set up e-mail addresses and mobile numbers for each subscriber in the Subscriber Address Book (Figure 9-3).

SMS Alerts

You can send SMS messages to subscribers when alert conditions occur.

Setting SMS Server

Before sending SMS messages to an individual subscriber, you need to define SMS Server correctly.

1. On the Center V2 window, click the **SMS** button (No. 6, Figure 9-1) and then select **SMS Setup** to display this dialog box.

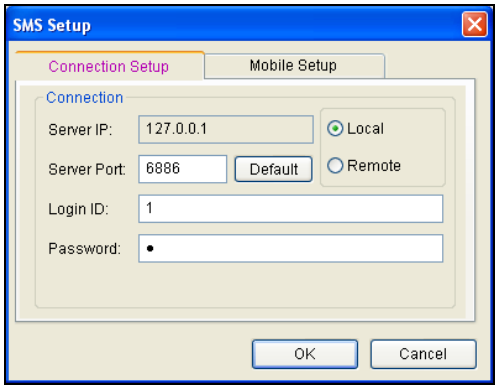


Figure 9-28

2. Type the IP address, communication port, Login ID and Password of the SMS Server.
3. If the SMS Server is installed at the same computer with the Center V2, select **Local.** If not, select **Remote**.

4. To set up three mobile numbers of Center V2 operators to get notified when Center V2 loses connection to SMS Server, click the **Mobile Setup** tab to display this window.

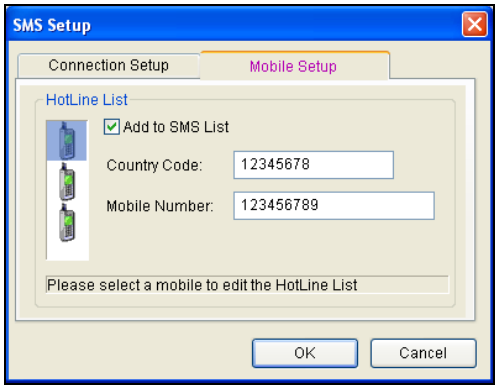


Figure 9-29

5. Select one mobile icon, check **Add to SMS List**, and type country code and mobile number.

For details on SMS Server, see Chapter 10 “Short Message Service “on the Surveillance System Software CD.

Connecting to SMS Server

On the Center V2 window, click the **SMS** button (No. 6, Figure 9-1) and then select **Connect to SMS Server** for connection.

Sending SMS

Once the connection of SMS Server and Center V2 is established, there are several ways to send SMS messages to subscribers. See the Center V2 window for the following selections.

1. Click the **SMS** button (No. 6, Figure 9-1) and select **Send Short Message**. This sends SMS to an individual subscriber manually.
2. On the Subscriber List (No. 4, Figure 9-1), right-click one subscriber and select **Send Short Message**. This sends SMS to an individual subscriber manually.
3. On the Event List, double-click one Event Type, except Attachment, to call up a message window. Click the **Send Short Message** icon on the window. This sends SMS to an individual subscriber manually.
4. Right-click one display channel and select **Send Short Message**. This sends SMS to an individual subscriber manually.
5. Click the **Preference Settings** button (No. 10, Figure 9-1), and select **Notification** to display the Alarm Settings window. Check the **Send SMS Alerts** item. This sends SMS to subscribers automatically when set alert conditions occur. For details, see *Notification Settings* earlier in this chapter.

E-Mail Alerts

You can send e-mails to subscribers when alert conditions occur.

Setting Mailbox

Before you can send e-mails to a separate e-mail account, you need to define your mailbox correctly.

To setup the mailbox

1. On the Center V2 window, click the **Preference Settings** button (No. 10, Figure 9-1), and then select **E-Mail Setup**. This dialog box appears.

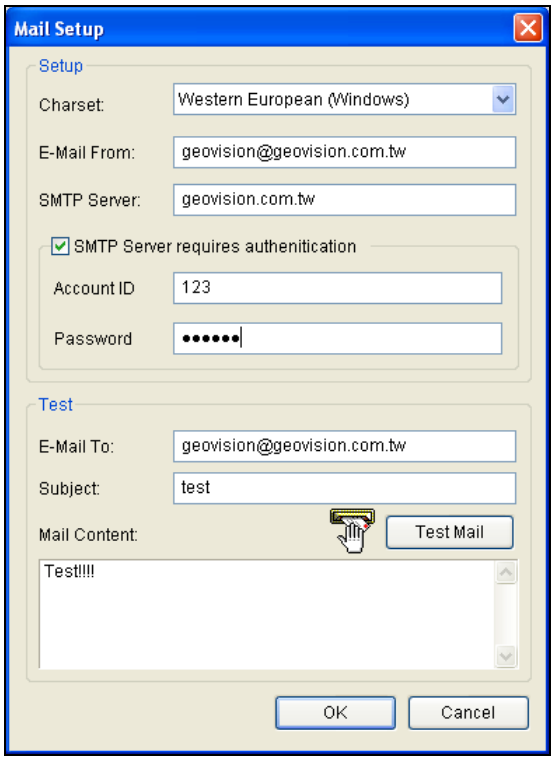


Figure 9-30

2. In the Charset field, select the set of characters and symbols that the e-mail uses.
3. In the E-Mail From field, enter your e-mail address.
4. In the SMTP Server field, enter the outgoing server address.
5. If your e-mail service provider requires authentication for sending e-mails, check **SMTP Server requires authentication**, and define the account ID and password of your SMTP.
6. Click **OK**.

To send a test e-mail

After setting up your mailbox, you can use the Test section and send a message to your own e-mail account for testing.

1. Enter your own e-mail address in the E-Mail To field.
2. Enter a subject for the e-mail
3. Type the desired message in the Mail Content field.
4. Click the **Test Mail** button.

Sending E-Mail

There are several ways to send e-mail alerts. See the Center V2 window for the following selections.

1. On the Subscriber List (No. 4, Figure 9-1), right-click one subscriber, and then select **Send E-Mail**. This sends the e-mail to an individual subscriber manually.
2. Right-click one display channel, and then select **Send E-Mail**. This sends the e-mail to an individual subscriber manually.
3. On the Event List, double-click one Event Type, except Attachment, to call up a message window. Click the **Send E-Mail** icon on the window. This sends the e-mail to an individual subscriber manually.
4. Click the **Preference Settings** button (No. 10, Figure 9-1), and select **Notification** to display the Alarm Settings window. Check the **Send E-Mail** item. This sends e-mails to subscribers automatically when set alert conditions occur. See *Notification Settings* earlier in this chapter.

E-Map Alerts

You can configure an instant E-Map alert to lay out the locations of triggered cameras, sensors and alarms within a floor plan.

For this application, subscribers must already create their own E-Maps using the E-Map Editor and activate **WebCam Server**.

To configure E-Map alert at the Center V2, right-click one online subscriber on the Subscriber List (No. 4, Figure 9-1) and select **E-Map**.

For details on E-Map, see *E-Map Application,* Chapter 7 on the Surveillance System Software CD.

CHAPTER

10

Short Message Service

Via a GSM/GPRS modem, GV-System lets you send SMS (Short Message Service) messages when an alert condition happens. The modem can be installed at either a separate server, or the same computer/server equipped with GV-System. This chapter introduces how to manage a GSM/GPRS modem with the GV-developed SMS Server program, and how to configure the Main System to send out SMS alerts.

Installing SMS Server

To install the SMS Server application, follow these steps:

1. Insert the Surveillance System Software CD to the PC connected to a GSM/GPRS modem. It will run automatically, and a window appears.
2. Select the **Install V 8.0.0.0 System** item.
3. Click **SMS Server**, and follow the on-screen instructions.

The SMS Server Window

Run the SMS Server program from the Start menu. The following window appears.

Figure 10-1 *The SMS Server Window*

The controls in the SMS Server window:

No.	Name	Description
1	Start/Stop Service	Starts or stops the SMS Server.
2	SMS Log Setting	Sets up the SMS Log.
3	Account Setting	Creates and edits accounts.
4	Server Setting	Sets up the SMS Server.
5	Device Setting	Sets up the GSM/GPRS modem.
6	Exit	Logs out administrator, changes password or exits the SMS server.

SMS Server Setup

Before starting the SMS service, you must configure these three settings: (1) Device Settings, (2) Server Settings, and (3) Account Settings.

Device Settings

1. Click the **Device Setting** button (No. 5, Figure 10-1), and then select **GSM Module**. The following dialog box appears.

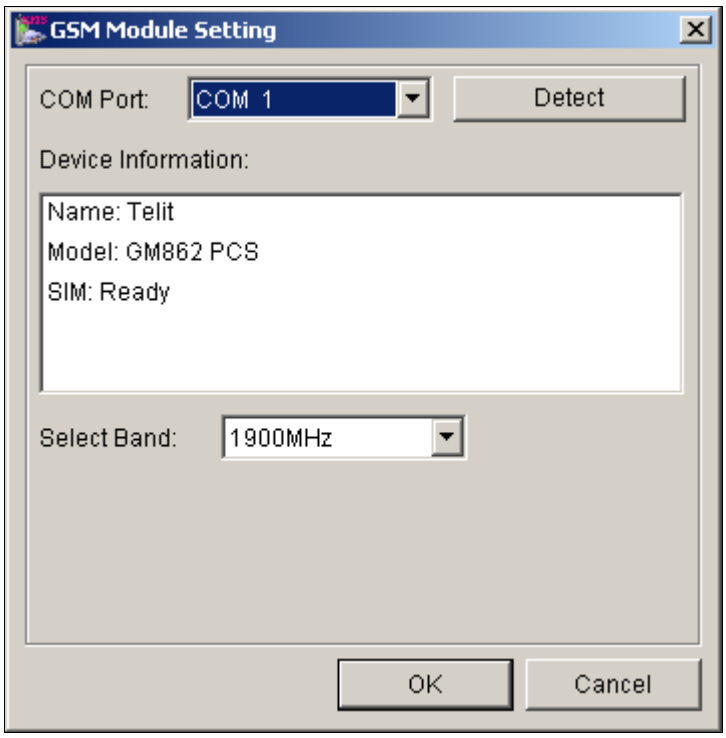


Figure 10-2 *GSM Module Setting*

2. Select the **COM port** connecting to a GSM/GPRS modem.
3. Click the **Detect** button to detect the modem.
   - If the connection between the modem and the computer is established, the message will show in the Device Information field: *Name: (Manufacturer), Module: xxx, SIM Ready.*
   - If the connection fails, the display will be shown as: *No usable device in COM xxx.*
4. If you are using a tri-band modem, select **1900** or **1800 MHz** from the drop-down list of Select Band.
5. Click **OK** to apply above settings.

Server Settings

Click the **Server Setting** button (No. 4, Figure 10-1) to display the following Server Setting dialog box. There are three major tabs in the dialog box: (1) General, (2) Message Filter, and (3) Notify

[General]

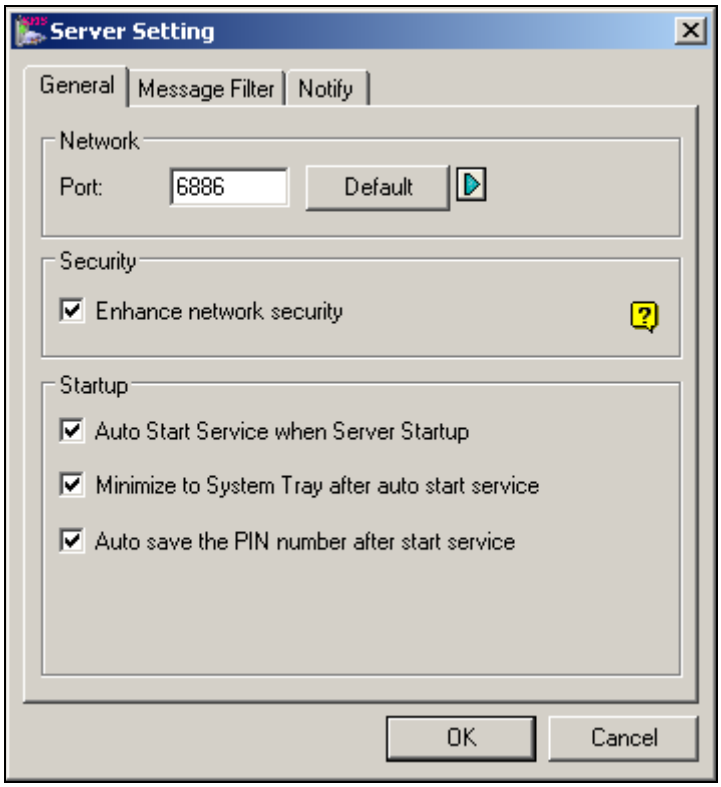


Figure 10-3 *Server Setting-General*

[Network] Define the port of the SMS Server, or leave it as default. To use UPnP for automatic port configuration to your router, click the **Arrow** button. For details, see *UPnP Settings* in Chapter 6.

[Security] Enable to apply enhanced Internet security. Please notice when the feature is enabled, the subscribers using earlier version than 8.0 cannot access the SMS Server anymore.

[Startup]

- **Auto Start Service when Sever Startup:** Automatically starts SMS services when the program starts.
- **Minimize to System Tray when auto start service:** Minimizes the SMS Server window to system tray when it starts.
- **Auto save the PIN number after start service:** Automatically saves the PIN number when SMS services start.

[Message Filter]

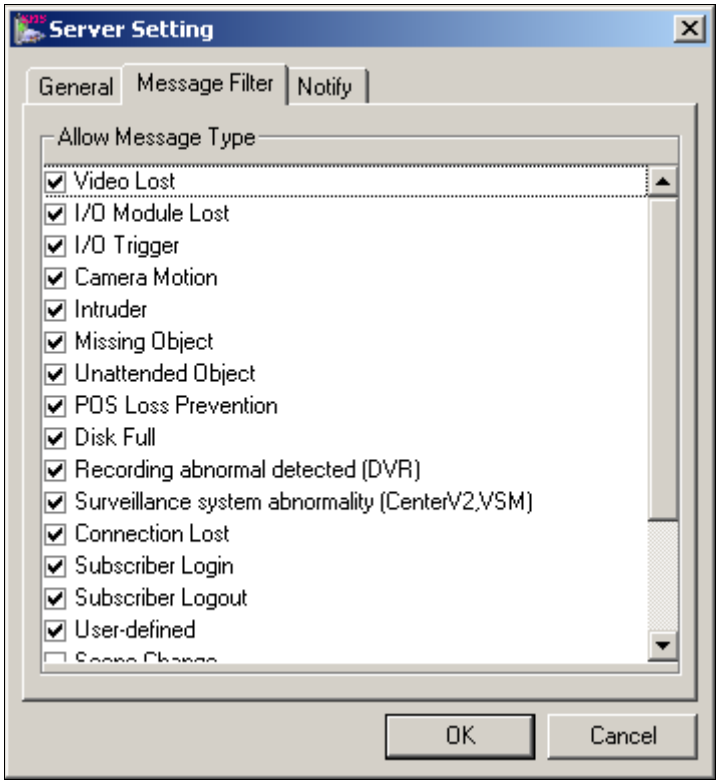


Figure 10-4 *Server Setting-Message Filter*

Check the desired alert conditions to send SMS messages.

The **user-defined** condition refers to the SMS messages sent manually in Center V2 and VSM. See *Sending SMS* in Chapter 1 and Chapter 3 in the *CMS User's Manual*.

[Notify]

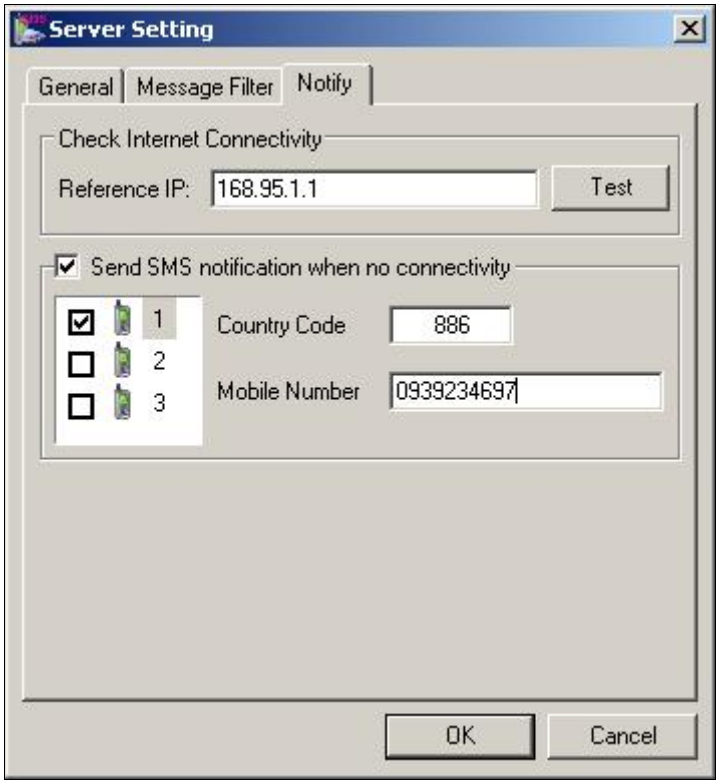


Figure 10-5 *Server Setting-Notify*

[Check Internet Connectivity] Assign any available IP address and click the **Test** button to know if your SMS Server can access Internet.

[Send SMS notification when no connectivity] Sends SMS notification to the three defined mobile numbers when the SMS Server cannot access Internet.

- **Mobile Icon:** Check the icon and define the number for the SMS notification. Up to three recipients can receive the SMS simultaneously.

Account Settings

Click the **Account Setting** button (No.3, Figure 10-1) to display the following window.

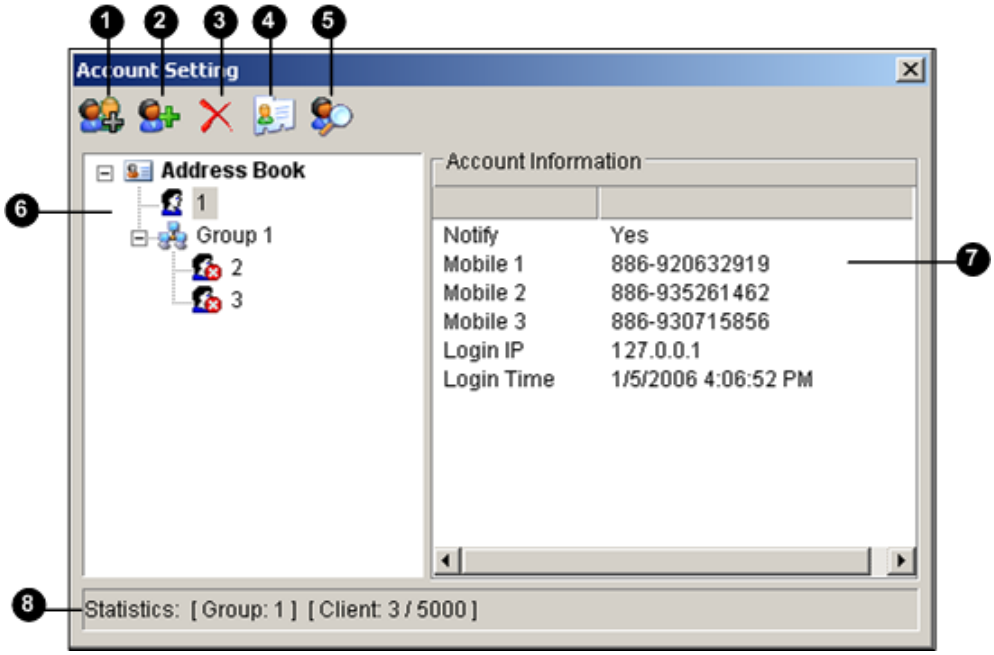


Figure 10-6 *Account Setting*

The controls in the Account Setting window:

No.	Name	Description
1	Add A Group	Creates a group.
2	Add A Client	Creates a client.
3	Delete A Group/Client	Deletes a created group or client.
4	View/Edit A Client	Highlight one client and click the button to view or edit its information.
5	Find A Client	Searches a client.
6	Address Book	Lists the created groups and clients.
7	Account Information	Displays the highlighted client's account information.
8	Statistics	Displays the number of created groups and clients. The SMS Server can serve up to 5000 clients at one time.

Creating a client:

1. Click the Add A Client button (No. 2, Figure 10-6). This dialog box appears.

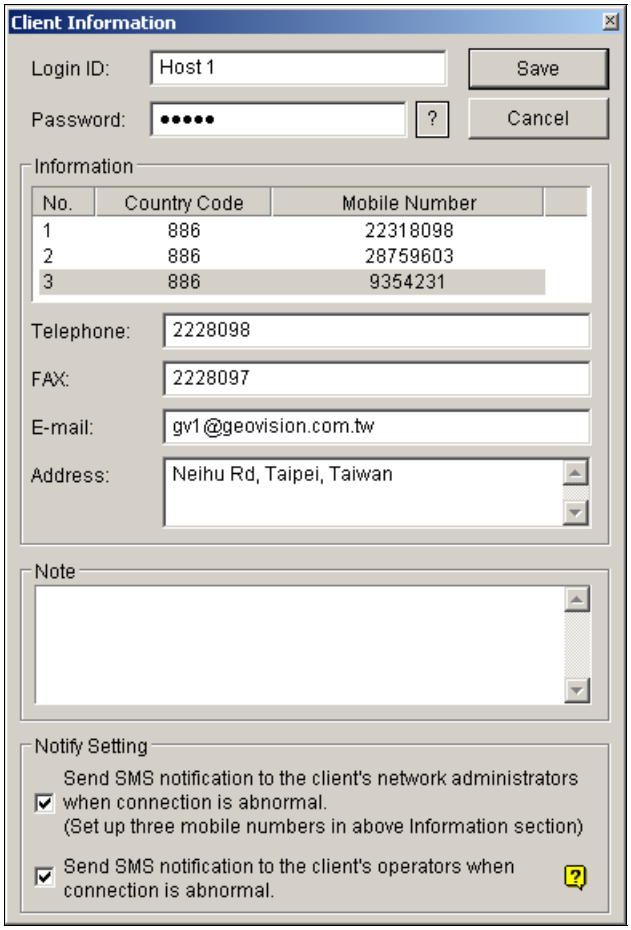


Figure 10-7 *Client Information*

2. Type a login ID and password. They will be the ID and password for the client to log in the SMS Server. Refer to Figure 10-11.
3. In the Information section, type the client's related information.

   You can specify three mobile numbers of the client's network administrators for SMS notification.
4. In the Notify Setting section, you can send a SMS to the client in the case of:
   - Internet disconnection between the client and the SMS Server, or
   - Improper program shutdown in the client.

   The recipients can be:
   - The client's network administrators: define three mobile numbers in above Information section.
   - The client's operators: See *Setting Mobile Numbers*, later in this chapter. For the users of Dispatch Server and Vital Sign Monitor, refer to the *CMS User's Manual*. Clicking the **Question** mark can view the specified mobile numbers at the client site.
5. Click **Save** for above settings.

Disabling a client:

You can disable subscription services to an individual client when subscription expires.

In the Account Settings window (Figure 10-6), right-click the desired client and then select **Disable**.

To restore the service, right-click the desired client and then select **Enable**.

SMS Log

Setting SMS Log

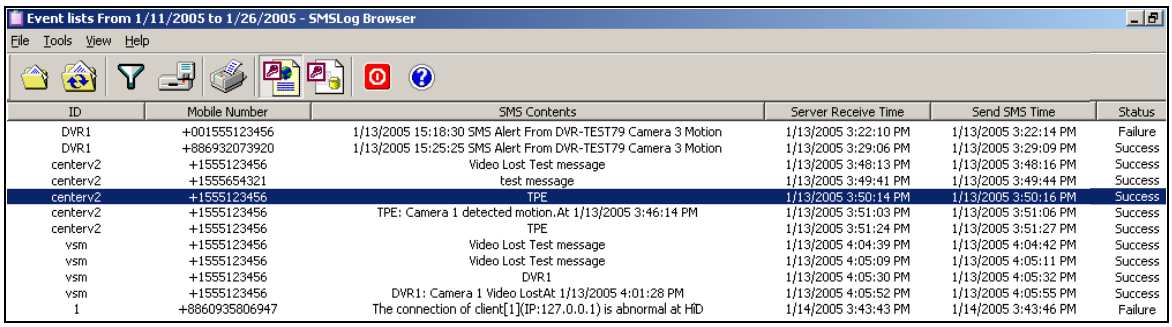
Click the **SMS Log Setting** button in the SMS Server window (No. 2, Figure 10-1), and select **SMSLog Setting** to display the following dialog box. The settings are similar to *Event Log Settings in* Figure 9-21 in Chapter 9.

Viewing SMS Log

Click the **SMS Log Setting** button in the SMS Server window (No. 2, Figure 10-1), and select **View SMSLog** to display the SMS Log Browser. The browser is the same as *Event Log Browser* in Figure 9-18 in Chapter 9, except the following two unique features:

SMS Event Log

Clicking the **SMS Event Log** button on the toolbar, you can monitor senders (ID), mobile numbers, text messages, sent and failed SMS. **This can be beneficial as you may charge your clients by the amount of SMS messages they sent.**



ID	Mobile Number	SMS Contents	Server Receive Time	Send SMS Time	Status
DVR1	+001555123456	1/13/2005 15:18:30 SMS Alert From DVR-TEST79 Camera 3 Motion	1/13/2005 3:22:10 PM	1/13/2005 3:22:14 PM	Failure
DVR1	+886932073920	1/13/2005 15:25:25 SMS Alert From DVR-TEST79 Camera 3 Motion	1/13/2005 3:29:06 PM	1/13/2005 3:29:09 PM	Success
centerv2	+1555123456	Video Lost Test message	1/13/2005 3:48:13 PM	1/13/2005 3:48:16 PM	Success
centerv2	+1555654321	test message	1/13/2005 3:49:41 PM	1/13/2005 3:49:44 PM	Success
centerv2	+1555123456	TPE	1/13/2005 3:50:14 PM	1/13/2005 3:50:16 PM	Success
centerv2	+1555123456	TPE: Camera 1 detected motion.At 1/13/2005 3:46:14 PM	1/13/2005 3:51:03 PM	1/13/2005 3:51:06 PM	Success
centerv2	+1555123456	TPE	1/13/2005 3:51:24 PM	1/13/2005 3:51:27 PM	Success
vsm	+1555123456	Video Lost Test message	1/13/2005 4:04:39 PM	1/13/2005 4:04:42 PM	Success
vsm	+1555123456	Video Lost Test message	1/13/2005 4:05:09 PM	1/13/2005 4:05:11 PM	Success
vsm	+1555123456	DVR1	1/13/2005 4:05:30 PM	1/13/2005 4:05:32 PM	Success
vsm	+1555123456	DVR1: Camera 1 Video LostAt 1/13/2005 4:01:28 PM	1/13/2005 4:05:52 PM	1/13/2005 4:05:55 PM	Success
1	+8860935806947	The connection of client[1](IP:127.0.0.1) is abnormal at HID	1/14/2005 3:43:43 PM	1/14/2005 3:43:46 PM	Failure

Figure 10-8

System Event Log

Clicking the **System Event Log** button on the toolbar, you can monitor the server activities, client login and logout, and connection problems.

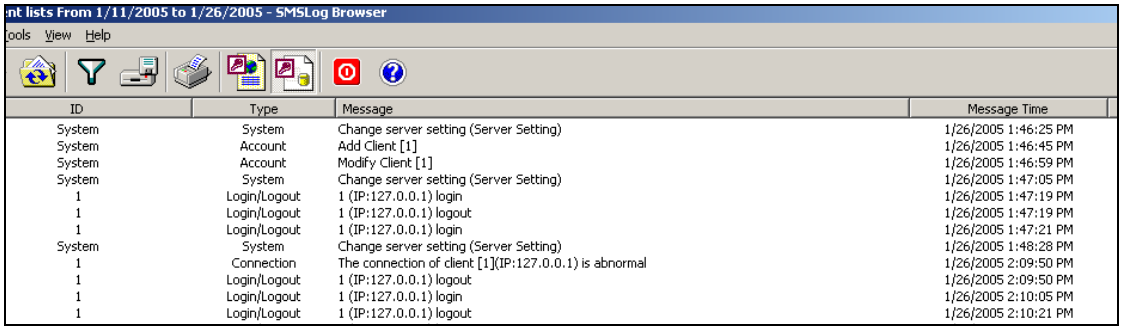

nt lists From 1/11/2005 to 1/26/2005 - SMSLog Browser
ools View Help
ID Type Message Message Time
System System Change server setting (Server Setting) 1/26/2005 1:46:25 PM
System Account Add Client [1] 1/26/2005 1:46:45 PM
System Account Modify Client [1] 1/26/2005 1:46:59 PM
System System Change server setting (Server Setting) 1/26/2005 1:47:05 PM
1 Login/Logout 1 (IP:127.0.0.1) login 1/26/2005 1:47:19 PM
1 Login/Logout 1 (IP:127.0.0.1) logout 1/26/2005 1:47:19 PM
1 Login/Logout 1 (IP:127.0.0.1) login 1/26/2005 1:47:21 PM
System System Change server setting (Server Setting) 1/26/2005 1:48:28 PM
1 Connection The connection of client [1](IP:127.0.0.1) is abnormal 1/26/2005 2:09:50 PM
1 Login/Logout 1 (IP:127.0.0.1) logout 1/26/2005 2:09:50 PM
1 Login/Logout 1 (IP:127.0.0.1) login 1/26/2005 2:10:05 PM
1 Login/Logout 1 (IP:127.0.0.1) logout 1/26/2005 2:10:21 PM

Figure 10-9

Password Security

To prevent unauthorized users from changing your settings, set up an administrator password. To apply the password security, follow these steps:

1. Click the **Exit** button (No. 6, Figure 10-1), and then select **Change Password** to set a password.
2. Click the **Exit** button, and select **Logout Administrator** to lock the SMS Server window.
3. When you want to log in, click the **Exit** button and select **Login as Administrator**. A valid password is required.

Connecting GV-System to SMS Server

To connect the GV-System to the SMS Server, follow these steps:

1. In the Main System, click the **Configure** button, and then select **System Configure** to display the System Configure window.
2. In the Send Alerts Approach section, click the right arrow button to display this dialog box.

Figure 10-10 *Send Alerts Approach Setup*

3. Check the **Alternative Alert Approach** item to enable other options.
4. Specify the Interval of two sent-out messages. The Interval time can be set up to 1440 minutes. Any alert condition will be ignored by the system during the interval.
5. Click the **Account Setting** button to display the following window.

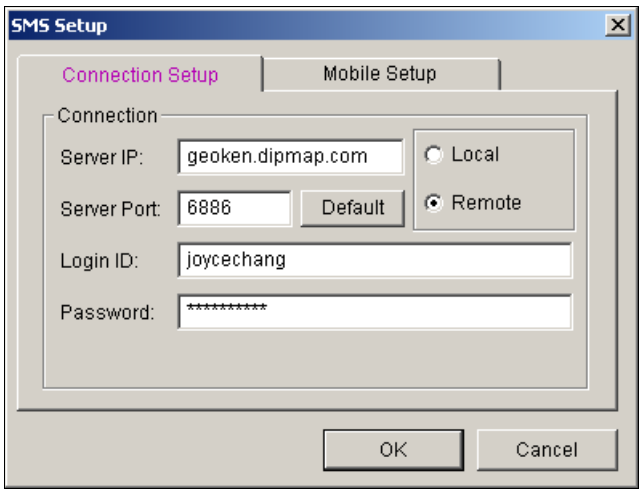


Figure 10-11 *SMS Setup- Connection Setup*

- **Server IP:** Enter the IP address of the SMS Server.
- **Server Port:** Enter the server port of the SMS Server, or keep it as default.
- **Login ID & Password:** Enter a valid ID and password registered in the SMS Server. See Figure 10-7.
- **Local:** If the GSM/GPRS modem is installed at the same server with the GV-System, select this item.
- **Remote:** If the GSM/GPRS modem is installed at a separate server, select this item.

6. Click **OK** to apply above settings.
7. Click the **Test Account** button (Figure 10-10). If the connection of both devices is established, the message will appear: *Login SMS Server OK!* If the connection fails, the message will appear: *Connect to SMS Server Fail.*

Setting Mobile Numbers

The Main System allows you to configure three mobile phone numbers for the SMS service. When an alert condition happens, the SMS messages will be sent out to the three assigned mobile phones simultaneously.

1. Open the **Send Alerts Approach Setup** dialog box (see Figure 10-10). .
2. Click the **Account Setting** button. This displays the SMS Setup dialog box (see Figure 10-11).
3. Click the **Mobile Setup** tab in the upper of the window. The following dialog box appears.

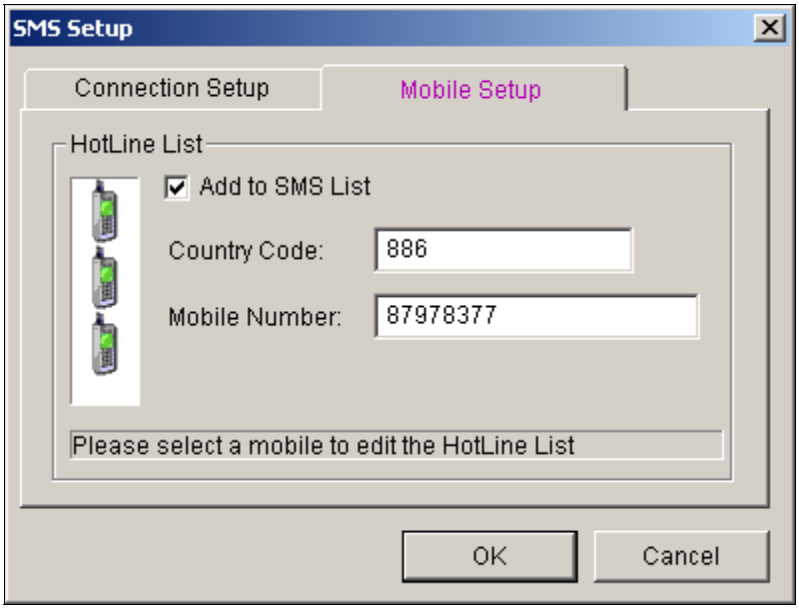


Figure 10-12 *SMS Setup- Mobile Setup*

4. Click one mobile phone icon, and then check the **Add to SMS List** item for the mobile phone setup.
5. Type Country Code and Mobile Number.
6. Click other mobile phone icons, and follow step 4 and 5 to set up the rest of two mobile phone numbers separately.
7. Click **OK** to apply above settings.

Note: To configure an alert condition of sending out SMS messages, see *Send Event Alerts* in Chapter 1 for details.

CHAPTER

11

Useful Utilities

This chapter discusses some advanced level features and utilities that could help administrator to maximize system performance in a security network.

Dynamic DNS

The Dynamic DNS is an application that allows users to register domain names that always point to their GV-Systems. This application is only necessary when your GV-System is using a dynamic IP address. If so, the DDNS will update GV-System's IP address to DNS Server in every 10 minutes. Therefore, even if your GV-System's IP address changes, you can still locate it by using the registered domain name.

Dynamic DNS supports Windows XP, Windows 2000, and Windows Server 2003 only, but not supports Windows 95/98 or ME.

Dynamic DNS uploads IP address over the Internet through ports 80 and 81. If your GV-System is connected behind a router or firewall, make sure ports 80 and 81 are open. Dynamic DNS will only upload global IP addresses. If your GV-System is using virtual IP, NAT port mapping should be done first.

Installing Dynamic DNS

To install Dynamic DNS, follow these steps:

1. Insert the Surveillance System Software CD to your PC. It will automatically run, and a window appears.
2. Select the **Install V 8.0.0.0 System** item.
3. Select **Dynamic DNS Service**, and follow the on-screen instructions.

Registering Domain Name with DDNS

1. Go to **Windows Start**, point to **Programs**, select **DDNS**, and then run **Dynamic DNS Service** to bring up the DNSClient dialog box. Click **Register** and the following Dynamic DNS register page will appear.
2. Type a username in the Username field. Username can be up to 16 characters. Username will accept "a ~ z", "0~9", and "-", but will not accept space or "-" as the first character.
3. Enter a password in the Password field. Passwords are case-sensitive and must be at least 6 characters. Re-enter the password in the Re-Type password field for confirmation.
4. In the Word Verification section, type the code within the box. In this example, the code you should enter is *N4GN*. Word verification is not case-sensitive.

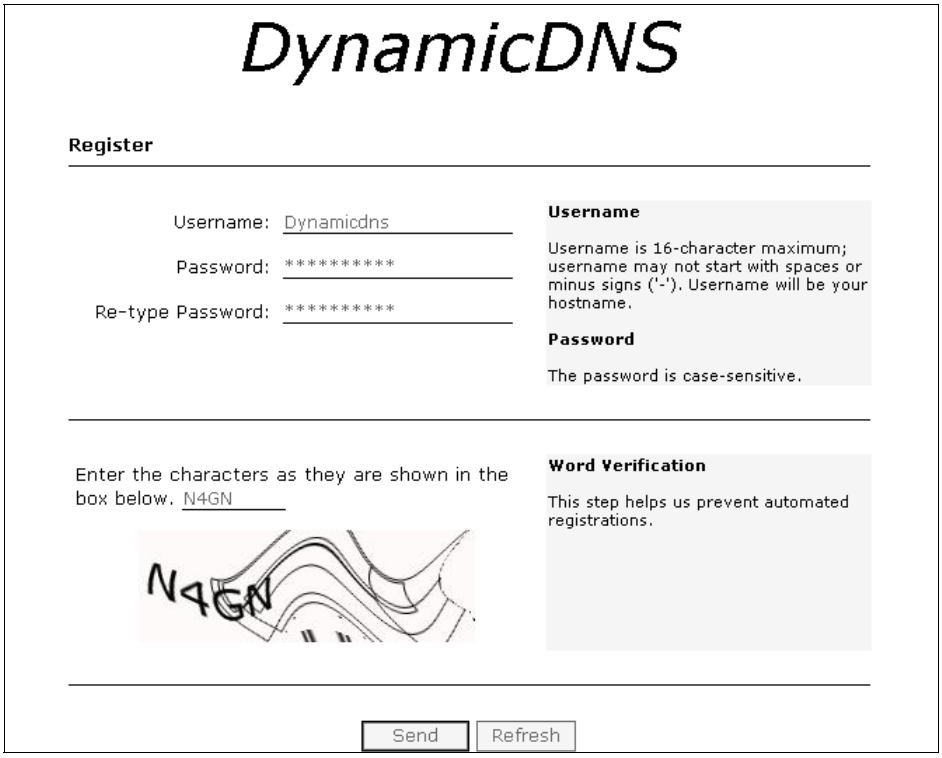


Figure 11-1

5. Click the **Send** button, and the system will display the following message if the registration is completed successfully.

Username: dynamicdns
Hostname: dynamicdns.dipmap.com
IP Address: 218.160.63.7
Your hostname will be activated in 2 minutes.
Your hostname will be deleted if you don't update your host address for 30 days.

Figure 11-2

- **Username:** The username you registered. In this example the username is “dynamicdns”
- **Hostname:** The hostname you created. Hostname is made by registered username and “dipmap.com”. In this example the host name is “ http://dynamicdns.dipmap.com ”. This will be the domain name you use for login to GV-System.
- **IP Address**: Your GV-System’s current IP address. This IP address will be updated every 10 minutes.

In the DNS Client dialog box, enter the registered username and password, and then press the **Save** button. The system will show the connection information as illustrated below. The DNS Client program is now activated. However, it will not upload IP address unless one of the following applications is running: the Main System, Center V2, VSM, Dispatch Server, Twin DVR, and SMS Server. If the IP address of your GV-System is not updated for more than 30 days, your host name will be deleted automatically.

Check **Run at startup** if you wish to auto run Dynamic DNS AP on the next Windows start-up.

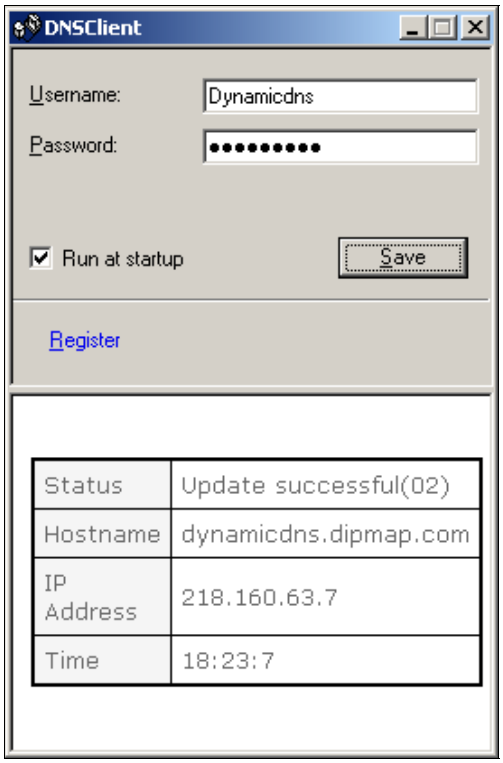


Figure 11-3

TwinDVR System

TwinServer is an external application that helps sharing the networking liability from the GV-System. A complete TwinServer concept requires at least two computers: a TwinServer, which should be run on the computer where GV-System is installed, and a TwinDVR, which should be run on a separate computer connected to the same LAN as the TwinServer. The TwinServer sends video stream to TwinDVR, while TwinDVR acts as a WebCam Server and serves all WebCam clients over the Internet. One TwinDVR can serve approximately 200 channels over the Internet. Multiple TwinDVRs can be added to the network as online traffic increases.

There are two ways to connect TwinServer and TwinDVR: TCP/IP mode and Multicast mode. Both have its advantages and disadvantages; choose the one that suits your application mostly.

TCP-IP Mode

TCP/IP is a simpler and cost-effective solution. In the TCP/IP mode, the TwinServer and TwinDVRs are connected in a point-to-point connection. It means that video streams are sent from TwinServer to TwinDVR-A, then TwinDVR-A duplicates the video streams and sends them to TwinDVR-B. If the connection between TwinServer and TwinDVR-A is broken, TwinDVR-B will not be able to receive video streams as well.

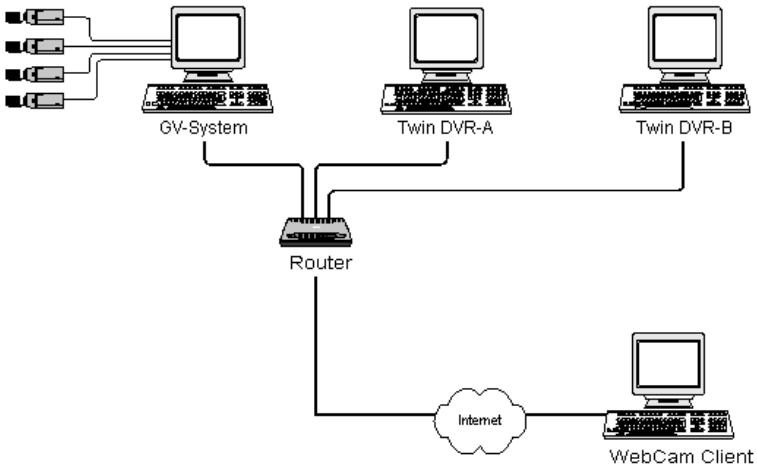


Figure 11-4

MultiCast Mode

Multicast Network is more complicated and expensive to setup. In the Multicast mode, the TwinServer transmits video streams in packets to a virtual buffer of the Multicast network. The virtual buffer then broadcasts the video streams to all TwinDVRs under the network. Each TwinDVR should be installed with two network cards. One is for the hub where TwinServer is plugged in, and the other for a DSL or ISDN modem with dedicated ISP service to the Internet. Each TwinDVR serves its own group of WebCam Clients.

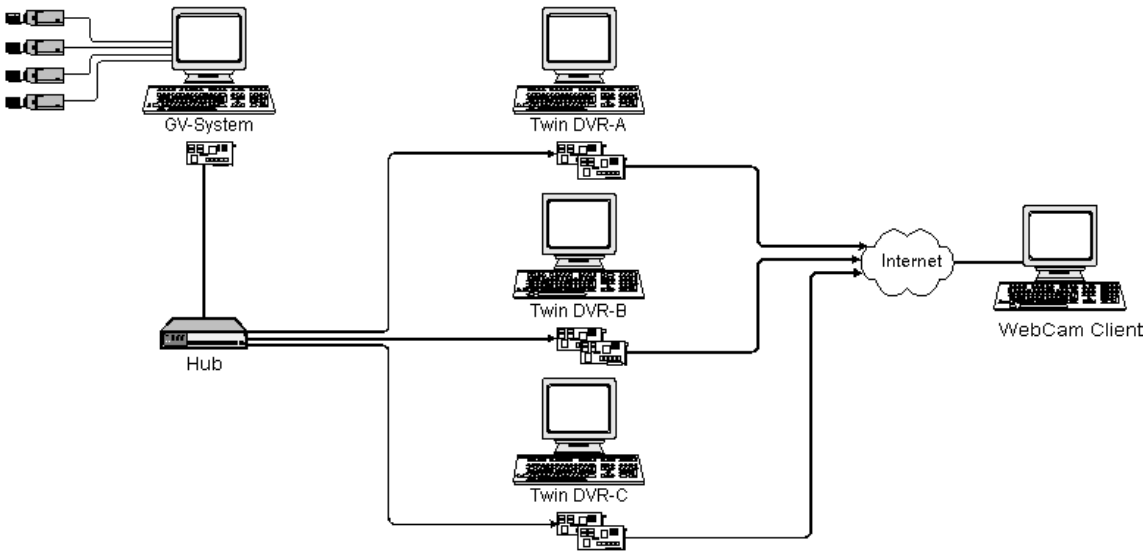


Figure 11-5

Starting TwinServer

1. In the Main System, click the **Network** button, and then select **TwinServer**. This TwinServer setup dialog box appears.

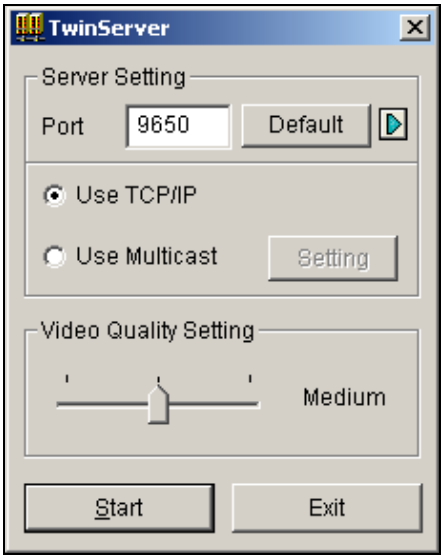


Figure 11-6 *TwinServer Settings*

2. The default port 9650 is for video transmission. Keep it as default or modify it if necessary. Using UPnP for automatic port configuration to your router, click the **Arrow** button. For details, see *UPnP Settings* in Chapter 6.
3. Select the type of network to be used: **Use TCP/IP** or **Use Multicast**. If **Use Multicast** is enabled, click the **Setting** button to display the Multicast Setting dialog box. See *Multicast Settings* below.
4. Use the **Video Quality Setting** slider to adjust video quality for Low, Med, or High.
5. Click the **Start** button to activate the TwinServer.

Multicast Settings

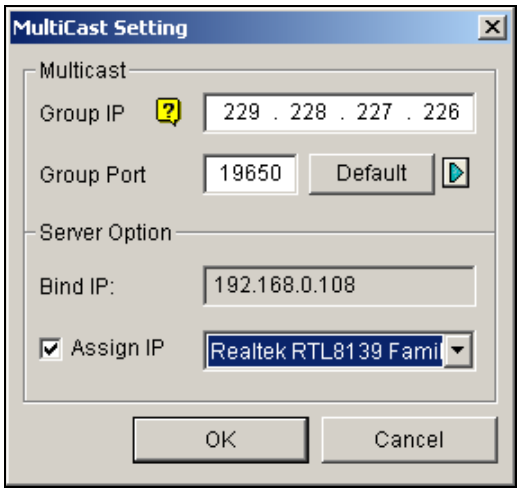


Figure 11-7 *MultiCast Settings*

[MultiCast]

- **Group IP:** Displays the IP address for the virtual buffer that stores the video streams in Multicast network.
- **Group Port:** Used for transferring video streams over the Multicast network. To enable the UPnP function, click the **Arrow** button. For details, see *UPnP Settings* in Chapter 6.

[Server Option] Only necessary if more than one network card is installed in your GV-System. Check **Assign IP** and select one network card. This will automatically bring up Blind IP of the network card.

Installing TwinDVR

The TwinDVR is included in the Surveillance System Software CD. This application should be installed in a separate PC within the same Local Area Network as the TwinServer. Before installation, make sure your PC meets the following minimum system requirements:

OS	Win 2000, XP, Server2003
CPU	Pentium4 2.0GHz (minimum)
Memory	256 MB RAM
Hard Disk	40 GB (minimum)
VGA	NVIDIA GeForce II 32MB
Network	TCP/IP

1. Insert the Surveillance System Software CD to the PC where TwinDVR will be installed. It will run automatically, and a window appears.
2. Select the **Install V 8.0.0.0 system** item.
3. Click **TwinDVR System**, and follow the on-screen instructions.
   During the installation, you may be prompted to install GeoMPEG4 codec; simply press **Yes**.

Starting TwinDVR

1. Run **TwinDVR.exe**. This displays the TwinDVR dialog box.

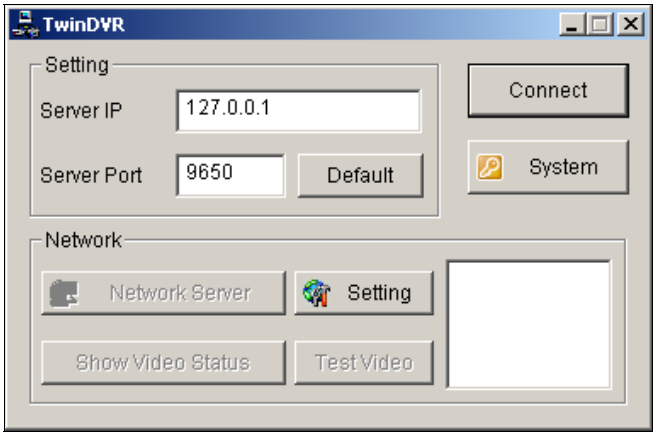


Figure 11-8 *TwinDVR Setup*

2. Type the IP address of TwinServer in the Server IP field.
3. Keep the server port in default, or it should match the TwinServer port. See Figure 11-6.
4. Click the **Connect** button to establish the connection between TwinDVR and TwinServer. A valid user ID and password are required.

If the connection is established, the **Network Server**, **Show Video Status**, and **Test Video** buttons will be available. You can now use them to set up TwinDVR for:

- Testing Video Stream
- Starting WebCam Server at TwinDVR
- Setting Multiple TwinDVRs in TCP/IP Mode
- Setting Multiple TwinDVRs in Multicast Mode

Testing Video Stream

This function allows you to test the video transmission between TwinServer and TwinDVR. Click the **Show Video Status** button to display 16 monitoring windows beneath the TwinDVR dialog box. Click the **Test Video** button and video streams from the connected TwinServer will be streamed to the monitoring windows for 10 seconds. You may click the **Hide Video Status** button to close the monitoring windows.

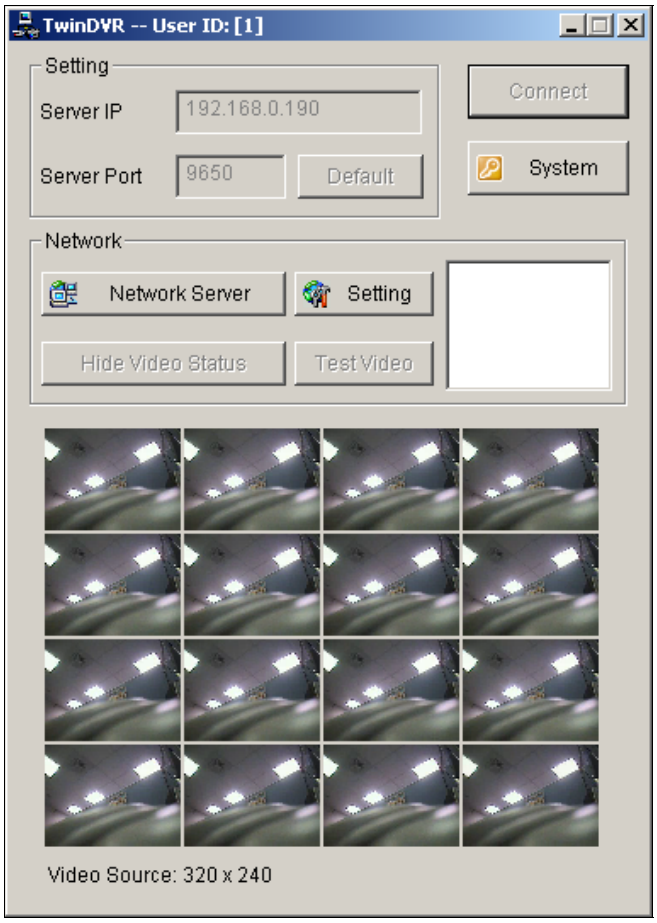


Figure 11-9 *Testing Video Stream*

Starting WebCam Server at TwinDVR

Click the **Network Server** button, and then select **WebCam Server** to display the Server Setup dialog box. See Figure 6-1.

Setting Multiple TwinDVRs in TCP/IP Mode

Click the **Network Server** button, and then select **Extended Server**. The Extended Server is to duplicate TwinServer's video stream and transmit it to the next TwinDVR in the same network. If there are five TwinDVRs in the network, you should activate the **Extended Server** function in TwinDVR 1, 2, 3, and 4 respectively. It's not necessary to activate TwinDVR 5 since there are no more TwinDVR running behind it.

Setting Multiple TwinDVRs in Multicast Mode

Click the **Network Server** button, and then select **Use Multicast Mode**. The Multicast mode is now activated. The Multicast Server is to instruct TwinDVR to obtain video streams from the virtual buffer. If there are five TwinDVRs connected to the network, all TwinDVRs will be required to select the **Use Multicast Mode** option.

TwinDVR Settings

Network Card Settings

In Figure 11-8, click the **Setting** button, and then select **Network Setting** to display the following dialog box. The Network Setting option is only necessary when your TwinDVR has more than one network card. Check **Assign IP** and select one network card. This will automatically bring up Blind IP of the network card. The network card will be used for connecting to TwinServer; the other network card will be assigned for connecting to Internet. If you want the TwinDVR to automatically reconnect to TwinServer, check **Retry until connected** and set the time interval.

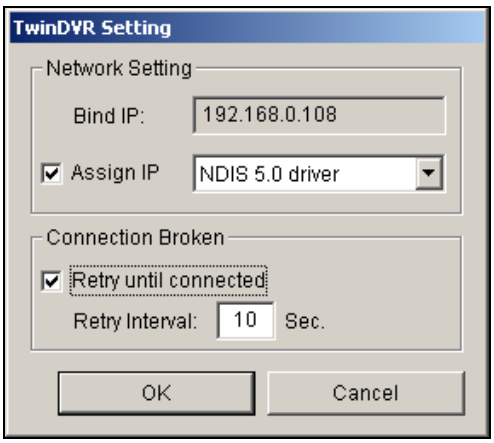


Figure 11-10 *TwinDVR Setting*

System Settings

In Figure 11-8, click the **Setting** button, and then select **System Configure** to display the following dialog box. The option is only available when TwinDVR is connecting to TwinServer.

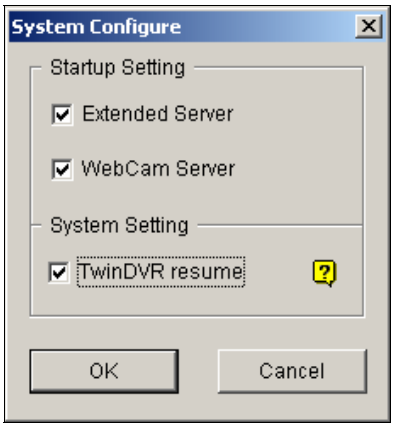


Figure 11-11 *System Settings*

[Startup Setting]

- **Extended Server:** Activates Extended Server on TwinDVR startup.
- **WebCam Server:** Activates WebCam Server on TwinDVR startup.

[System Setting]

- **TwinDVR resume:** Resumes TwinDVR connection when the system shuts down unexpectedly.

Watermark Viewer

You can make a watermark proof to protect videos from unauthorized alteration or manipulation. In Main System, click the **Configure** button, select **System Configure**, and then check **Use Digital Watermark Protection** option. This allows all recorded videos to be marked with a permanent and inseparable image.

The watermark is invisible to naked eyes. In order to see it, the video stream must be open in a watermarking verification program by following these steps:

1. Go to the system folder, and locate **WMProof.exe**.

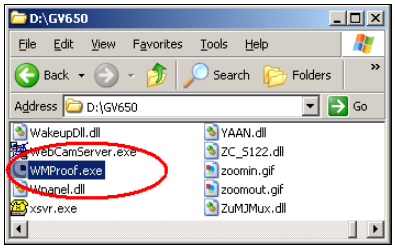


Figure 11-12

2. Double-click to open the program. This displays the following Watermark Viewer window.

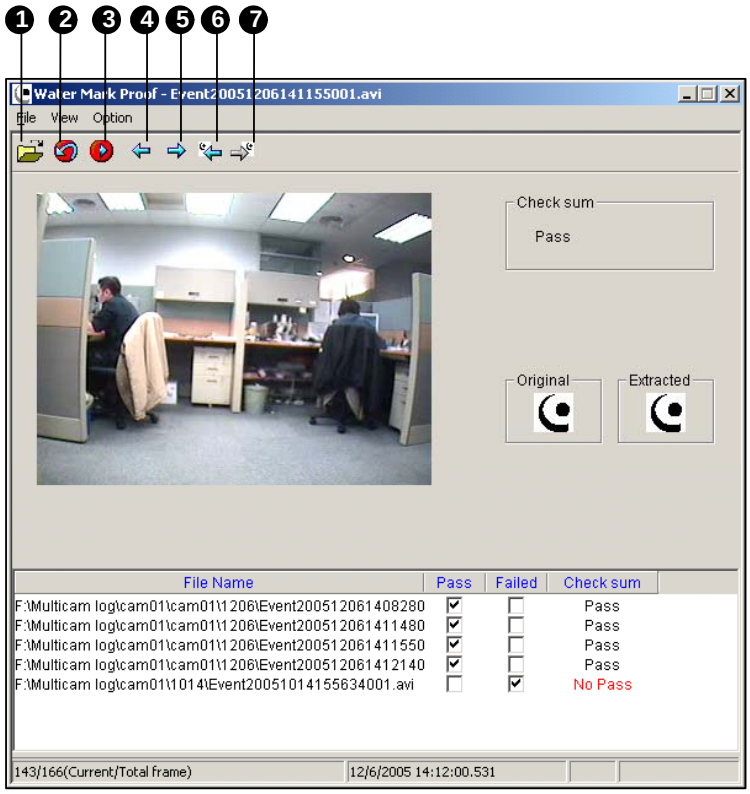


Figure 11-13

The controls in the window:

No.	Name	Description
1	Open File	Finds a video file to play.
2	First Frame	Goes to the first frame of the file.
3	Play	Plays the file.
4	Previous Frame	Goes to the previous frame of the file.
5	Next Frame	Goes to the next frame of the file.
6	Previous Watermarked Frame	Goes to the previous frame that contains watermark.
7	Next Watermarked Frame	Goes to the next frame that contains watermark.

The Watermark Viewer displays the verifying result as follows:

- **Check sum:** If the video stream has not been tampered, the Check Sum section displays a message: *Pass*. Otherwise a message: *No Pass* will appear.
- **Original vs. Extracted:** The Extracted section should have the same icon displayed as that in the Original section. If not, it indicates the video may have been altered.

3. Click the **Open File** button (No.1, Figure 11-13), select a video file and click **Open**. The video file is then listed in the status field of the window. Also, you can drag multiple video files directly from storage folders to the status field.
4. Highlight the file and double-click it to play.

Twin View Display

You can display Main System and ViewLog in two separated monitors. To make this operation possible, your system must equip with VGA card having dual video outputs. Each output should be connected to its own monitor display.

1. Right-click on the Windows desktop and select **Properties**. This displays the Display Property dialog box.
2. Select **Settings**, enable **Extend my Windows desktop onto this Monitor**, and then click the **Apply** button.

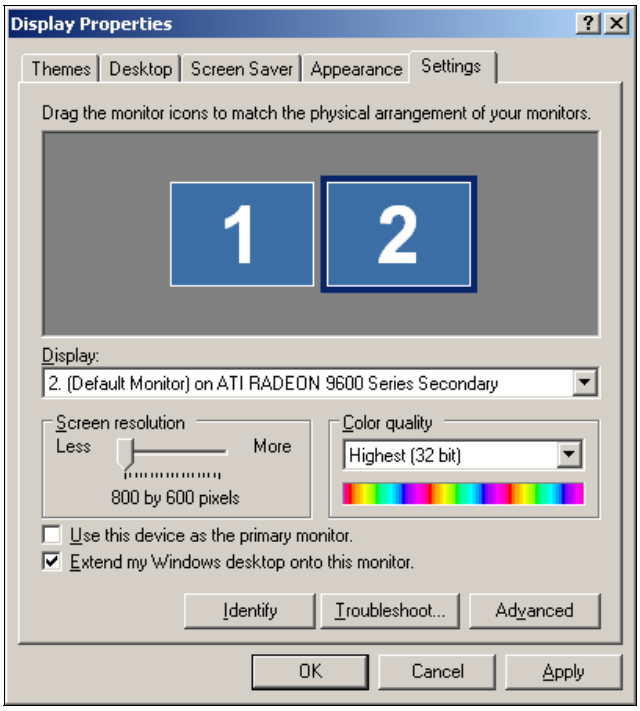


Figure 11-14

3. Go the system folder and locate **DMPOS.exe**.

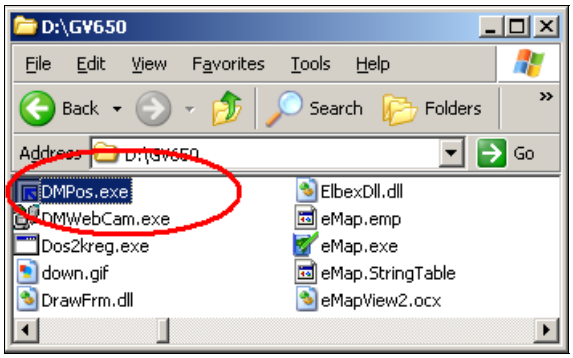


Figure 11-15

4. Double-click the program to display the Set Application Function Position window.

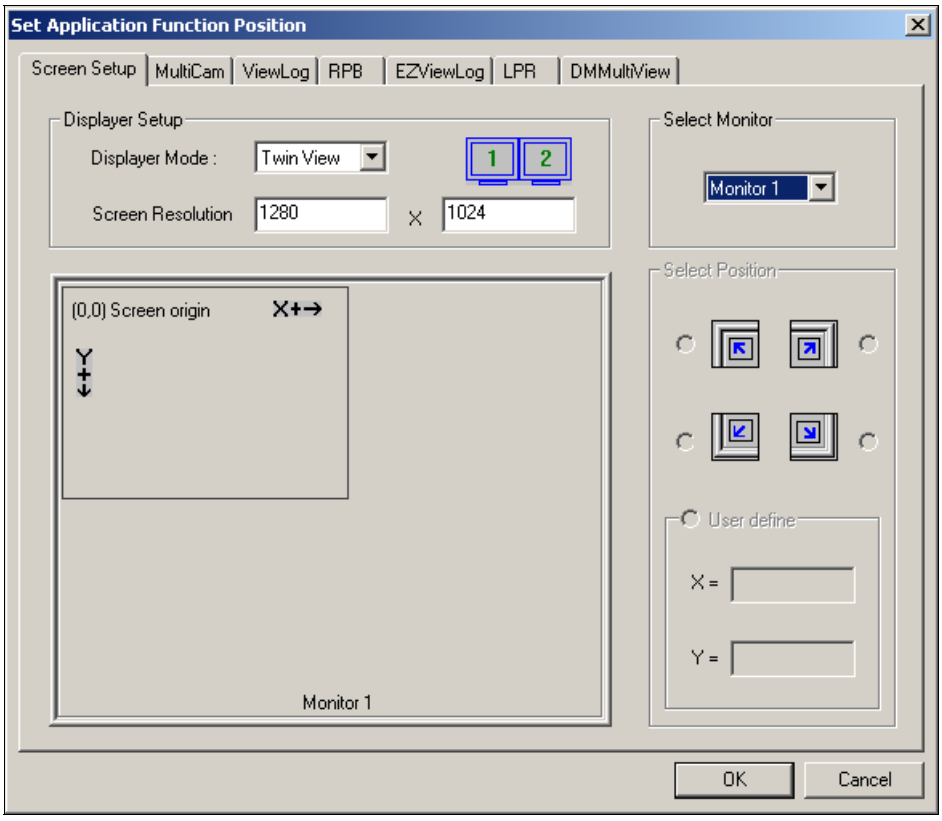


Figure 11-16

5. In the Screen Setup tab, select **TwinView** from the Displayer Mode drop-down list.
6. In the MultiCam tab, select **Monitor 1** from the Select Monitor drop-down list.
7. In the ViewLog tab, select **Monitor 2** from the Select Monitor drop-down list.
8. Click the **OK** button and start GV-System, which should appear in monitor 1.
9. Click the **ViewLog** button on the main screen and select **Video/Audio log** from the menu. ViewLog should appear in monitor 2.

Note: The **Select Position** option allows you to determine where to position GV software on Windows. It is only necessary if your GV-System is set at 800x600 panel resolution but your Windows desktop is set at 1024x768 or higher. It is recommended that both GV software and Windows desktop to be set at the same resolution. For details on how to set the resolution for GV-System, refer to *Panel Resolution* in Chapter 1.

Windows Lockup

This feature helps you to secure your PC while away from your workstation. You may lock up the Windows desktop while launching a customized GV-desktop. The GV-desktop is where operators are limited to run the GV-System and the selected programs.

The GV-desktop Screen

The GV-desktop program is included in the installation of Main System. Go to the system folder and execute **Desktop.exe**.

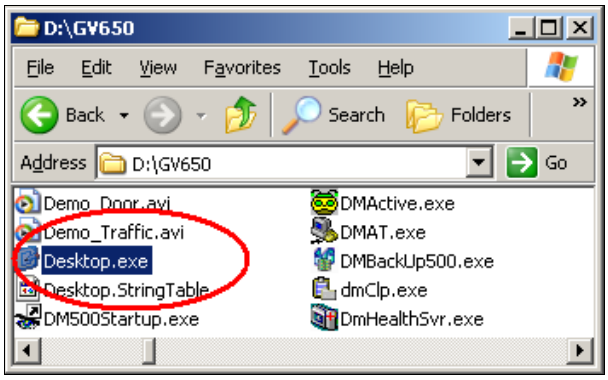


Figure 11-17

The following GV-desktop screen will appear.

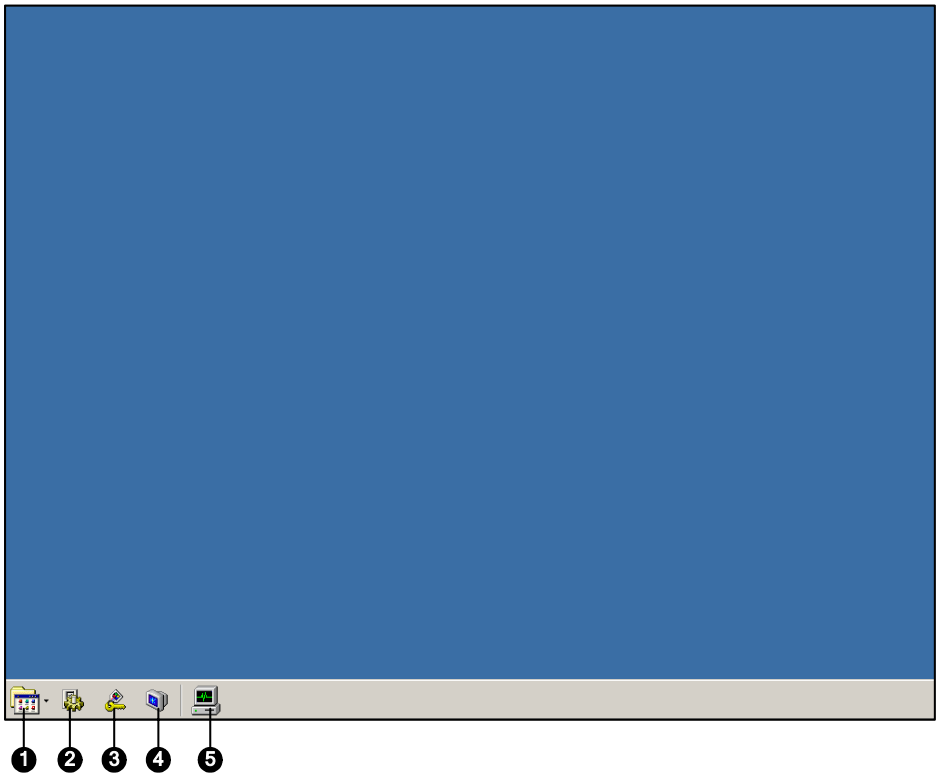


Figure 11-18

The controls in the GV-desktop screen:

Icon	Name	Description
1	Programs	Accesses programs.
2	Settings	Adds programs to the programs menu.
3	Log Off	Logs off GV-desktop.
4	Shut Down	Shuts down the computer.
5	Task Manager	Click to view the tasks currently running on your computer.

GV-desktop Features

The five buttons on GV-desktop are discussed below.

Programs

Click the **Programs** button to see the program menu. The default programs are Multicam Surveillance System (Main System), ViewLog, Backup System, Repair Database Utility, Remote Playback Server, and eMap Editor. You can add or remove new programs to the menu. For the example below, Paint is a new program added to the menu.

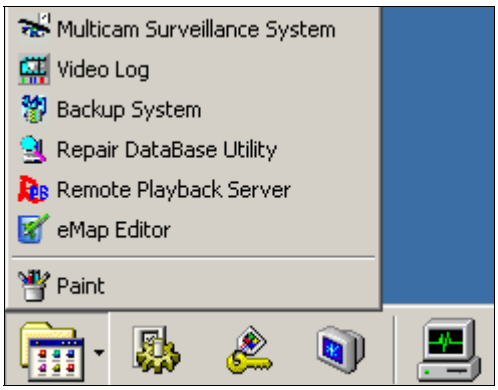


Figure 11-19

Settings

Click the **Settings** button to display the following window. A valid ID and password are required.

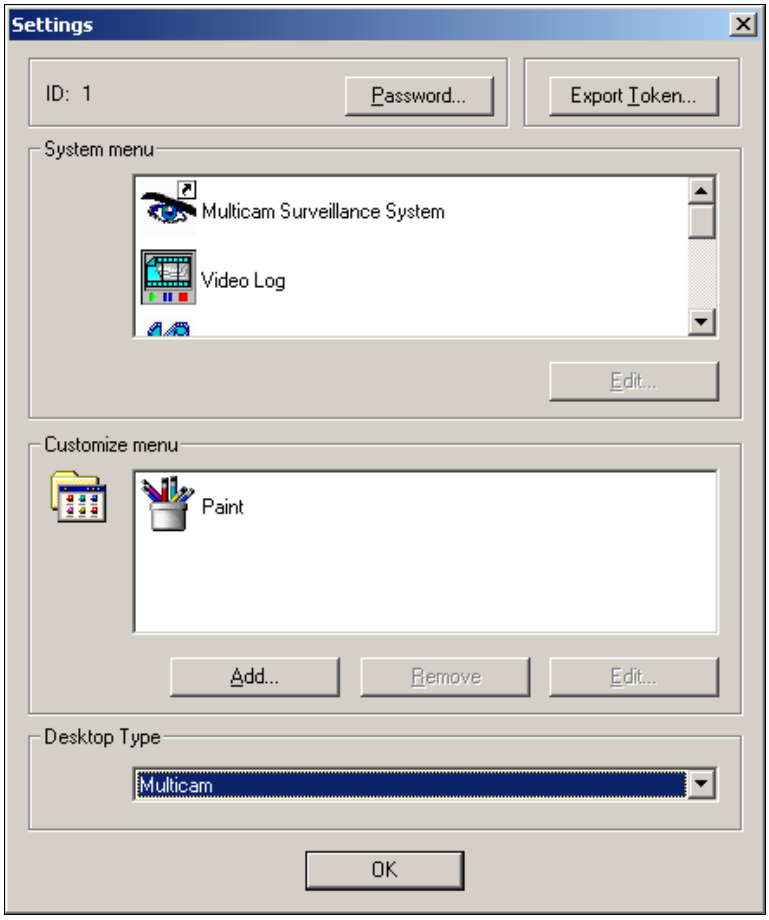


Figure 11-20

[Password] Click to change the password. For the option of Allow Removing Password System, see *Setting up Password* in Chapter 1.

[Export Token] This option is discussed in *Token File for Save Mode* later in this chapter.

[System Menu] The menu lets you rename system programs. Select a desired program and click the **Edit** button to change its name.

[Customized Menu] The menu lets you add other programs to the Programs menu. Click the **Add** button to display the following window. In the Target field, type a path or click the button next to the field to assign a path. Then enter the program name, comment, or even change an icon for the program. Finally, click **OK** to add the program.

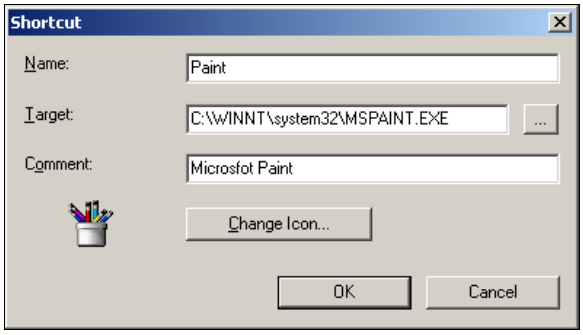


Figure 11-21

[Desktop Type] Select Windows or GV-desktop (Multicam) from the drop-down menu. The selected desktop will launch the next time when you log in to PC.

Log Off

Click the **Log off** button to log off GV-desktop. A valid ID and password are required.

Shut Down

Click the **Shut Down** button to shut down your computer. A valid ID and password are required.

Task Manager

Click the **Task Manager** button to view the programs currently running on your computer. When you minimize a program, it will be hiding and working in the background. Double-click the program listed in Task Manger to bring the program back to desktop.

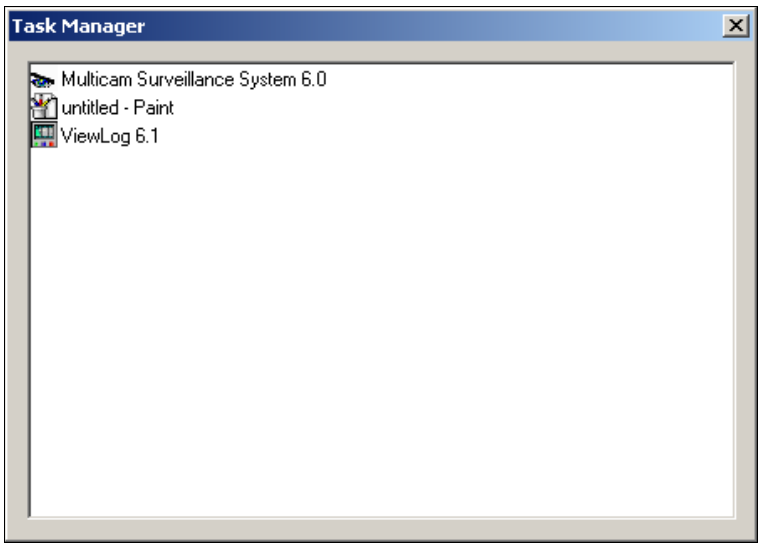


Figure 11-22

Token File for Save Mode

This option in the Settings section lets you export a token file. In case you enter safe mode and are in the status of the GV-desktop. This token file will let you exit from the GV-desktop and enter the Windows desktop. To export a token file and apply it, follow the steps below.

1. Click the **Export Toke** button to display the following dialog box.

Enter Token Code
In "Safe Mode(Boot)",users must locate "Token File" and enter "Token Code" to exit from the Multicam-Desktop.
Token Code:
123
Enter the Code up to 32 characters,with the combination of alphabets(ignoring case) and digits.
OK
Cancel

Figure 11-23

2. Type a code in the Token Code field.
3. Click **OK** to display the Save As dialog box.

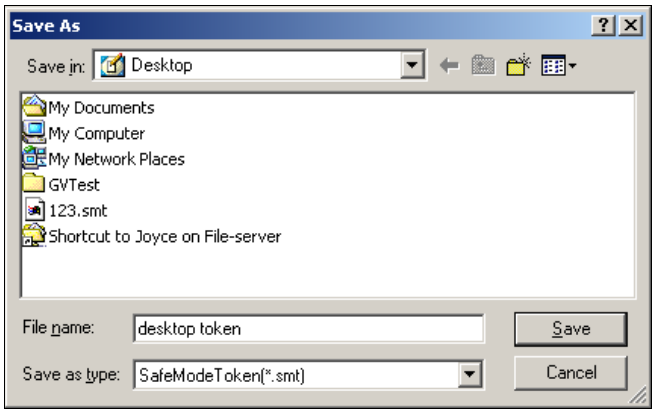


Figure 11-24

4. Locate a path, and enter a desired name in the File Name field.
5. Click **Save** to save the file.

   When you enter safe mode and are in the status of the GV-desktop:
6. Click the **Settings** button on the desktop. You will be prompted to locate the stored token file and enter the set token code.
7. When the Settings window appears (Figure11-20), select **Windows** in the Desktop Type field, and then exit from the window.
8. Click the **Log Off** button to log off the GV-desktop and enter the Windows desktop. The token code and file are also required here.

Authentication Server

The Authentication Server allows a remote server to restrict access to the password settings of local GV-Systems. When the Sever is working, the previous password settings in local GV-Systems will be invalid. Local GV-Systems will submit to the full control of the Server.

Installing the Server

To install this application in a remote sever, follow these steps:

1. Insert the Surveillance System Software CD. It will run automatically, and a window appears.
2. Select the **Install V8.0.0.0 System item**.
3. Click **Authentication Server**, and follow the on-screen instructions.

The Server Window

Go to Windows **Start**, point to **Programs**, select **AuthServer**, and then click **AuthServer**. This window appears.

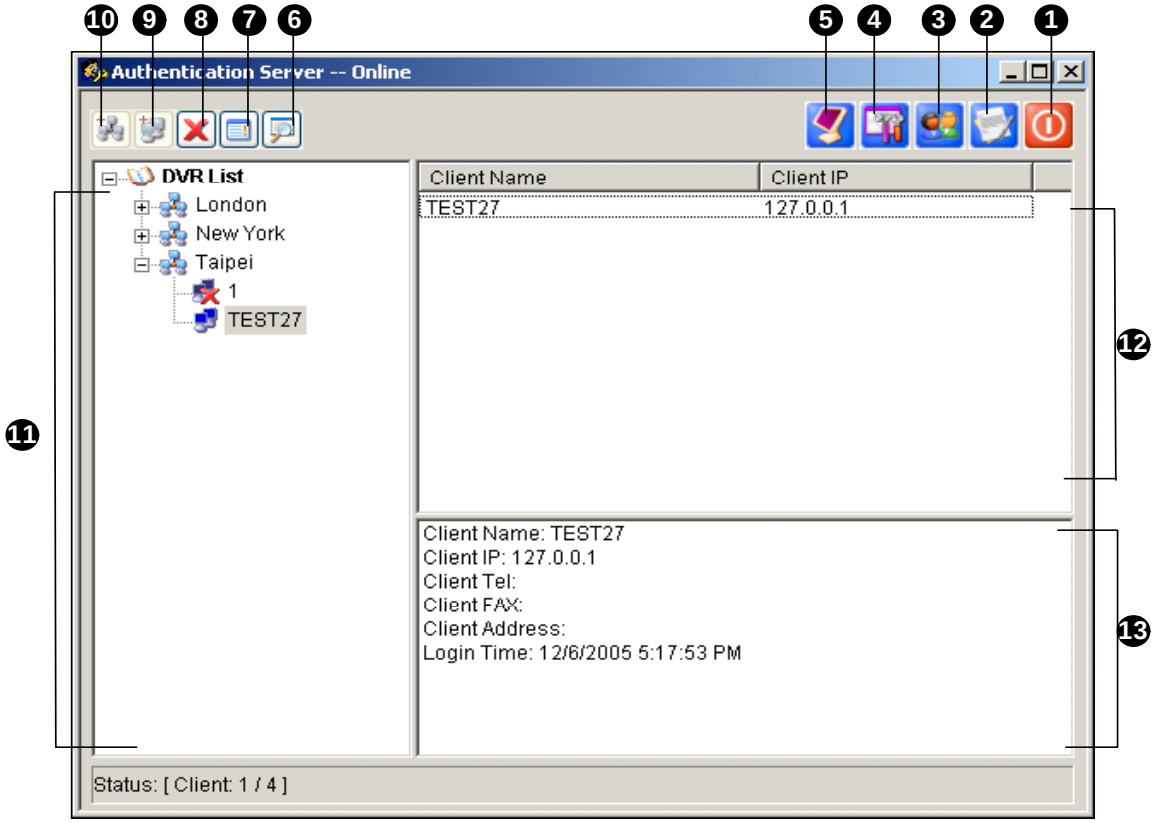


Figure 11-25 *The Authentication Server Window*

The controls in this window:

No.	Button Name	Description
1	Exit	Exits this window; Logs out Administrator; Changes Password, exports account information.
2	Log	Sets up the Authentication Server Log and opens the log browser.
3	Password Setup	Configures passwords and grants permissions to clients.
4	Server Setup	Configures the Authentication Server.
5	Start/Stop Service	Starts/Stops the Authentication Server.
6	Find A Client	Finds an existing client.
7	View/Edit A Client	Select a client from the DVR List, and click to view /edit it.
8	Delete An Area /Client	Deletes an existing group or client.
9	Add A Client	Creates a client account.
10	Add An Area	Creates an Area group.
11	DVR List	Lists the created clients and area groups.
12	Connected DVR List	Lists the connected GV-Systems.
13	DVR Information	Lists the information of the selected GV-System.

Creating a DVR List

You can arrange your clients' GV-Systems into different groups for a better management. To create a DVR list, follow these steps:

1. To create a group, click the **Add An Area** button (No.10, Figure 11-25).
2. To create a client under the group, click the **Add A Client** button (No.9, Figure 11-25). This displays the Client Information dialog box.

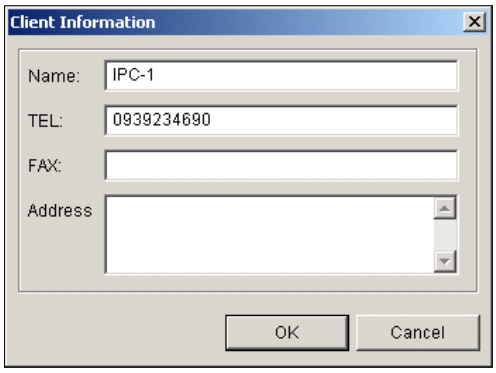


Figure 11-26 *Client Information*

3. Type the client's information. The Name must match that of local GV-System.
4. Click **OK**.

Editing a User

The Authentication Server operator can create users; can grant, deny, or modify permissions; and can allow access to local GV-Systems listed in the DVR list.

1. Click the **Password Setup** button (No.3, Figure 11-25) to display the Password Setup window. The window is the same as the Password Setup window in Main System (see Figure 1-29), except the following section.

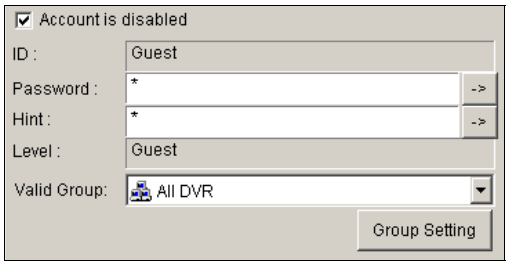


Figure 11-27 *Password Setup*

2. To create and edit a user, refer to *Setting up Password* in Chapter 1.
3. To grant access to local DVRs:
   a. Click the **Group Setting** button in the window. The Valid Group List window appears.
   b. Click the **New Group** button. The DVR Group Information window appears.
   c. Give a DVR group name, and check the desired DVRs into the group.
   d. Go back to the Password Setup window. Use the Valid Group drop-down list to select the created DVR group.

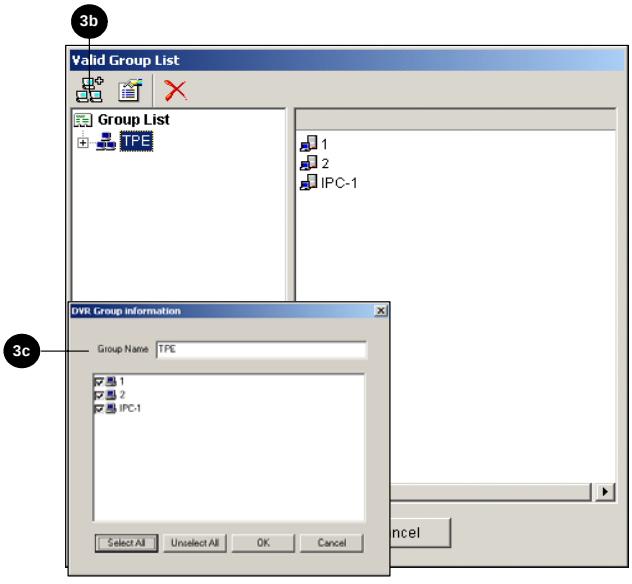


Figure 11-28 *Valid Group List and DVR Group Information*

Note: In the Password Setup window of Authentication Server, the **Fast Backup & Restore** tab is not available.

Starting the Server

To configure the server and start the service, follow these steps:

1. Click the **Server Setup** button (No. 4, Figure 11-25). This dialog box appears.

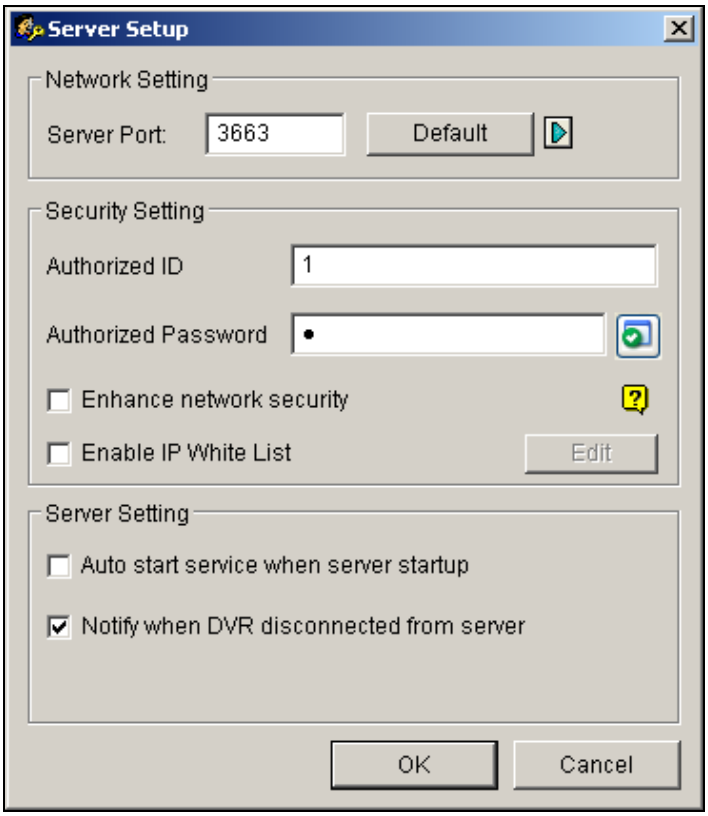


Figure 11-29 *Sever Setup*

[Network Setting] The default port number is 3663. Using UPnP for automatic port configuration to your router, click the **Arrow** button. For details, see *UPnP Settings* in Chapter 6.

[Authorized ID and Password] The ID and password entered will be those for the local DVRs to log in the server.

- **Enhance network security:** Enable to enhance network security on Authentication Server.
- **Enable IP White List:** Create a list of IP addresses allowed to connect to Authentication Server. For details, see *IP White List Settings* in Chapter 6.

[Server Setting]

- **Auto start service when server startup:** Starts automatically the service when Windows starts.
- **Notify when DVR disconnected from server:** Notifies the Authentication Server with a pop-up window when the DVR and server loss connection.

2. Click **OK** to apply above settings.
3. Click the **Start/Stop Service** button (No. 5, Figure 11-25) to start the connection.

Connecting GV-System to the Server

To configure the GV-System in order to access the Authentication Server remotely through a network connection, follow these steps:

1. Click the **Configure** button, point to **Password Setup**, and then select **Remote Authentication Setup**. This dialog box appears.

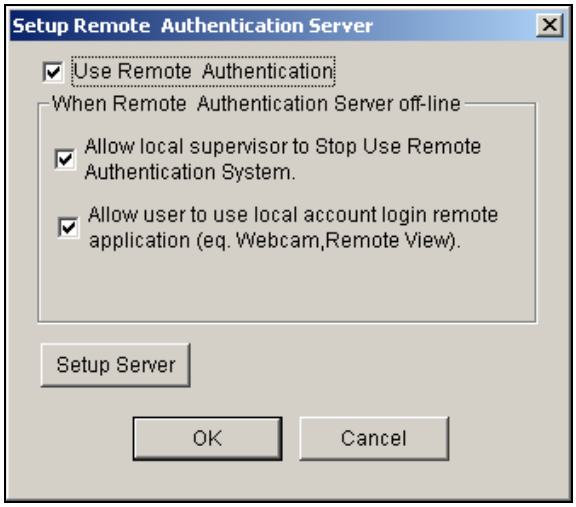

Setup Remote Authentication Server
Use Remote Authentication
When Remote Authentication Server off-line
Allow local supervisor to Stop Use Remote Authentication System.
Allow user to use local account login remote application (eq. Webcam,Remote View).
Setup Server
OK
Cancel

Figure 11-30 *Setup Remote Authenticator Server*

- **Use Remote Authenticator:** Enable the connection with the Authentication Server.
- **Allow Local supervisor to stop use remote authentic system:** Allows the local supervisor to stop the Authentication application when the connection fails. If the option is disabled and the connection fails, the dialog box won't be accessible until connection resumes.
- **Allow user to use local account login remote application:** Allows the local users to access other remote applications with their previous password and ID settings when the connection fails.

2. Click the **Setup Server** button in Figure 11-30. This dialog box appears.

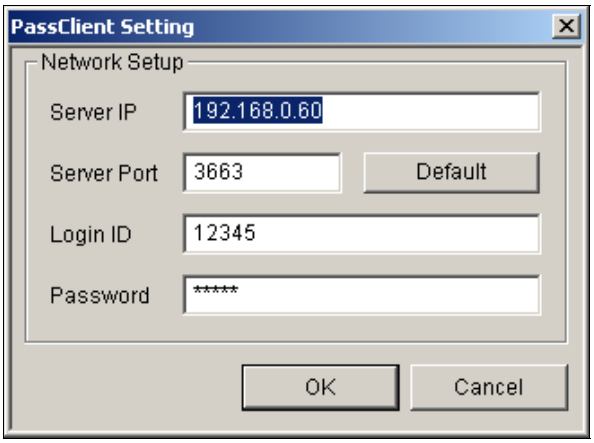


Figure 11-31 *PassClient Setting*

3. Enter the IP address and port of the Authentication Server. Enter the valid ID and password created in the Authentication Server (See Figure 13-29).
4. Click **OK** to start the connection. **When the connection is established, the previous password settings in the GV-System will be invalid.**
5. Press **[L]** on the keyboard to call up the Login dialog box. The icon indicates the connection is established.

Figure 11-32

6. Type a valid User ID and password for login.

As long as the Authentication sever is working, every time when you start the GV-System, the Login dialog box will appear.

Note: When the disconnection icon appears, there might be three reasons:

1. The valid ID and password created in the Authentication Server (see Figure 11-29) don't match those in the GV-System (see Figure 11-31).
2. The client's given name (see Figure 11-26) doesn't match the GV-System's.
3. The network media has traffic problem.

Fast Backup and Restore

With the Fast Backup and Restore (FBR) solution, you can change interface skin and customize features to suit personal preference, as well as back up and restore your configurations in Main System.

Installing the FBR Program

1. Insert the Surveillance System Software CD. It will run automatically, and a window appears.
2. Select the **Install V 8.0.0.0 system** item.
3. Click **Fast Backup & Restore Multicam System**, and follow the on-screen instructions.

Running the FBR Program

Run **Fast Backup & Restore main System** from the Start menu. This window will appear.

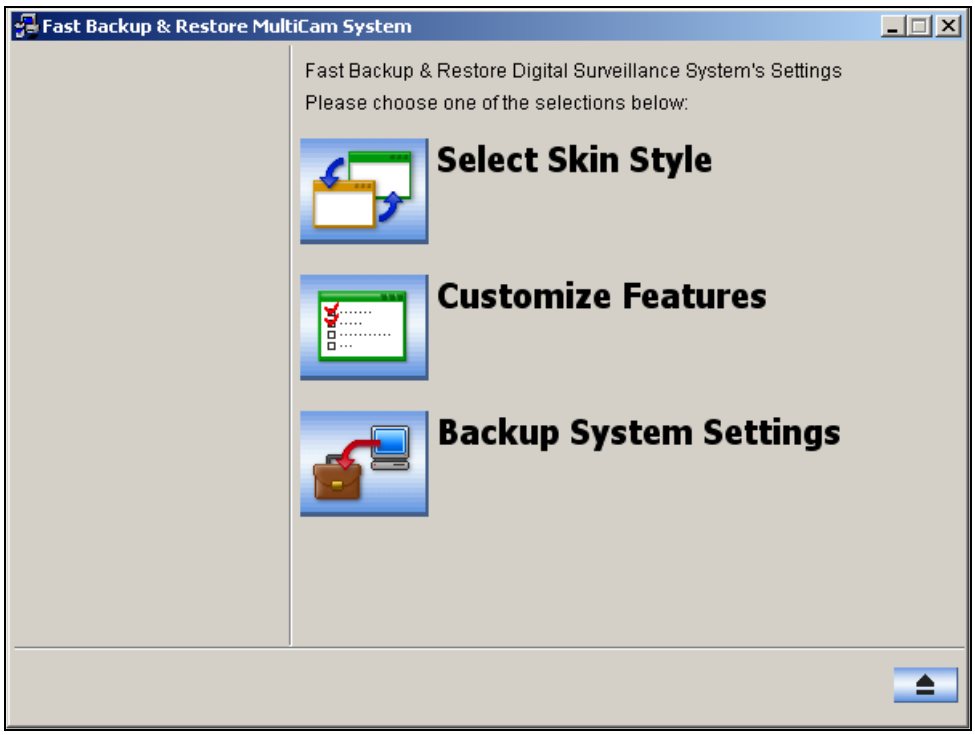

Fast Backup & Restore MultiCam System
Fast Backup & Restore Digital Surveillance System's Settings
Please choose one of the selections below:
Select Skin Style
Customize Features
Backup System Settings

Figure 11-33 *FBR Window*

Selecting a Skin

The GV-System provides two skin options: silver (default) and conventional. The skin change will only apply to the screens of Main System, ViewLog and remote applications. The dialog boxes won't be affected.

You can also change the screen image of startup splash, non-active video and video lost.

Changing the skin style

1. In the FBR window (see Figure 11-33), click the **Select Skin Style** icon. The option menu appears.
2. To use one skin style for all applications, simply select **All use Conventional Style** or **All use Silver Style**.
   To change the skin style of a single application, point to the desired application, and then select the skin style you want to apply.
3. Close the FBR window, and start the GV-System to see the change.

Customizing the screen images

You can replace the screen images of Startup Splash, Non-Active Video and Video Lost with your own.

Before you start, remember that each screen image has its specified size. Create your own image according to these specifications:

- **Startup Splash:** Bit Depth 24, Width 319, and Height 272.
- **Non-Active Video:** Bit Depth 24, Width 720, and Height 576.
- **Video Lost:** Bit Depth 24, Width 270, and Height 576.

To customize the screen image, follow these steps:

1. In the FBR window (see Figure 11-33), click the **Select Skin Style** icon, point to **DVR**, and then select **Custom Logo…**. This window appears.

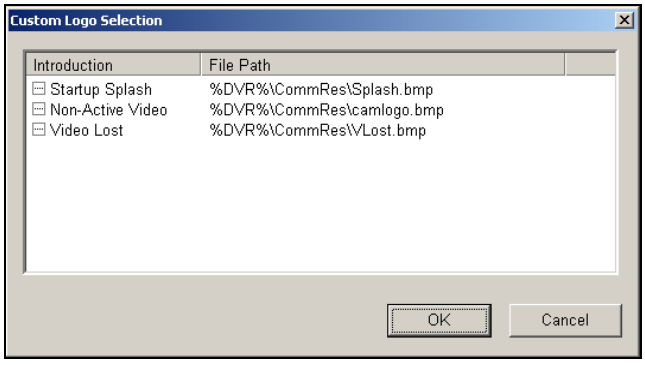


Figure 11-34

2. Click a desired screen image to be replaced with an imported image.
3. Exit the FBR program, and start the GV-System to see the change.

Customizing the Features

Not every feature may be of equal interest to you. You can now specify which features are to be displayed at system startup.

1. In the FBR Window (see Figure 11-33), click the **Customize Features** icon to display this dialog box.

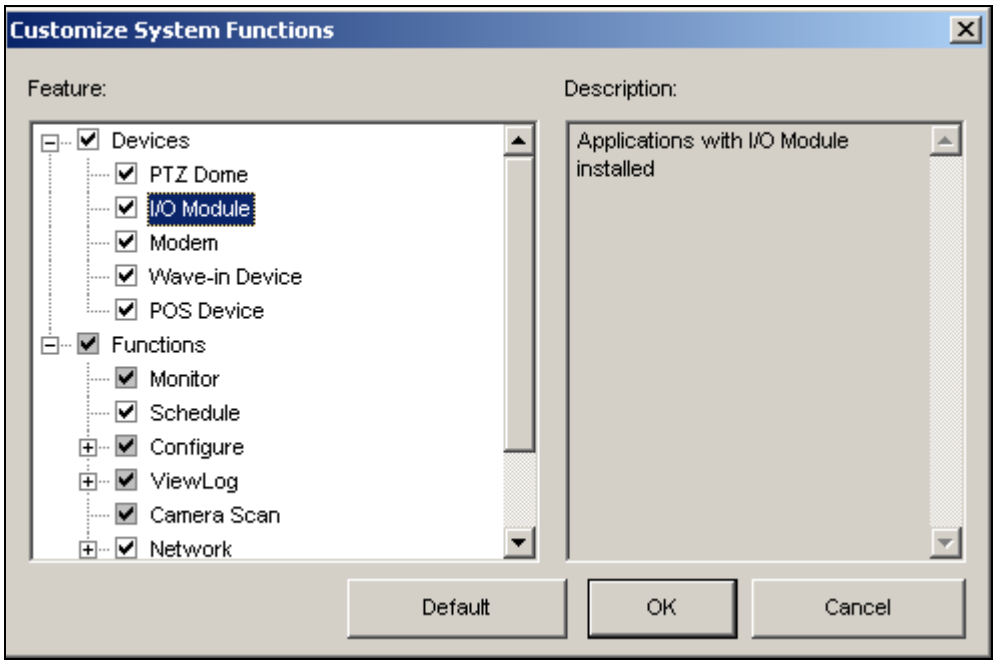


Figure 11-35

[Devices] Expand this folder, and select the device applications you want to enable in the GV-System.

[Functions] Expand this folder, and select the functions you want to enable in the GV-System. The gray checked boxes indicate that the functions are enabled by default. No changes can be made to these functions.

2. Click **OK** to apply the settings.

Backing up and Restoring Settings

You can back up the configurations you made in Main System, and restore the backup data to the current system or import it to another GV-System.

Backing up the settings

1. In the FBR window (see Figure 11-33), click the **Backup System Settings** icon. This dialog box appears.

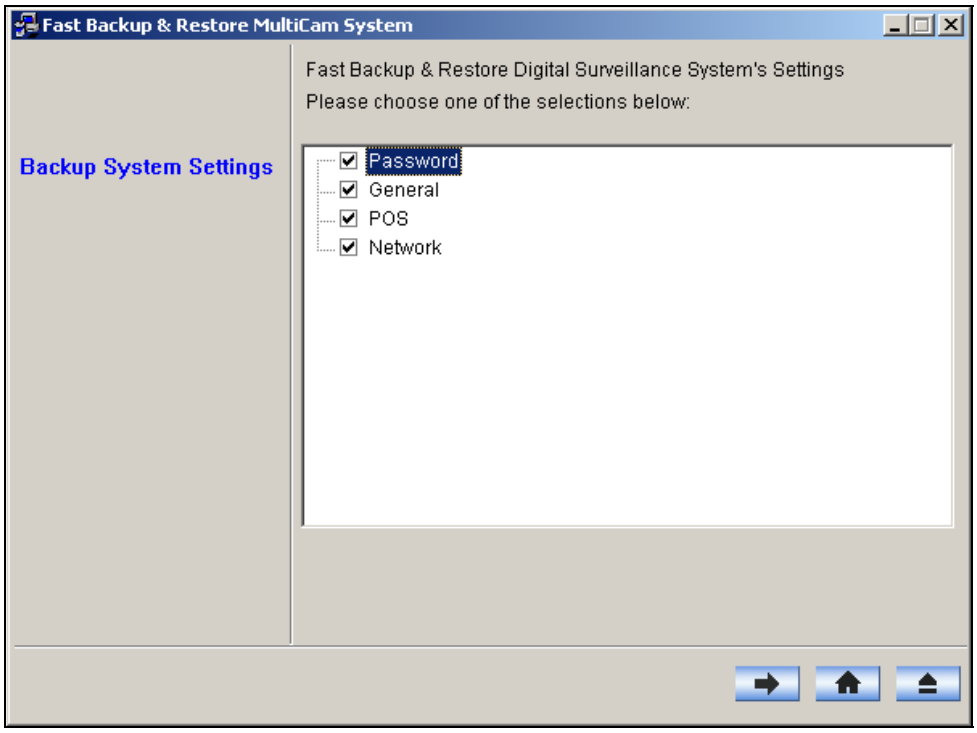


Figure 11-36

2. Check which settings you want to back up, and press the **Next Step** button . The Save As dialog box appears.
3. Select the destination drive to store the backup file. When the backup is complete, this message will appear: *Successfully Backup MultiCam System Settings*.

Restoring the System

You can restore the current system with the backup of configuration file. Also, you can copy this backup file to configure another system with the same settings as the current system.

1. Open the backup file (*.exe) you previously stored. A valid ID and password are required to display this window.

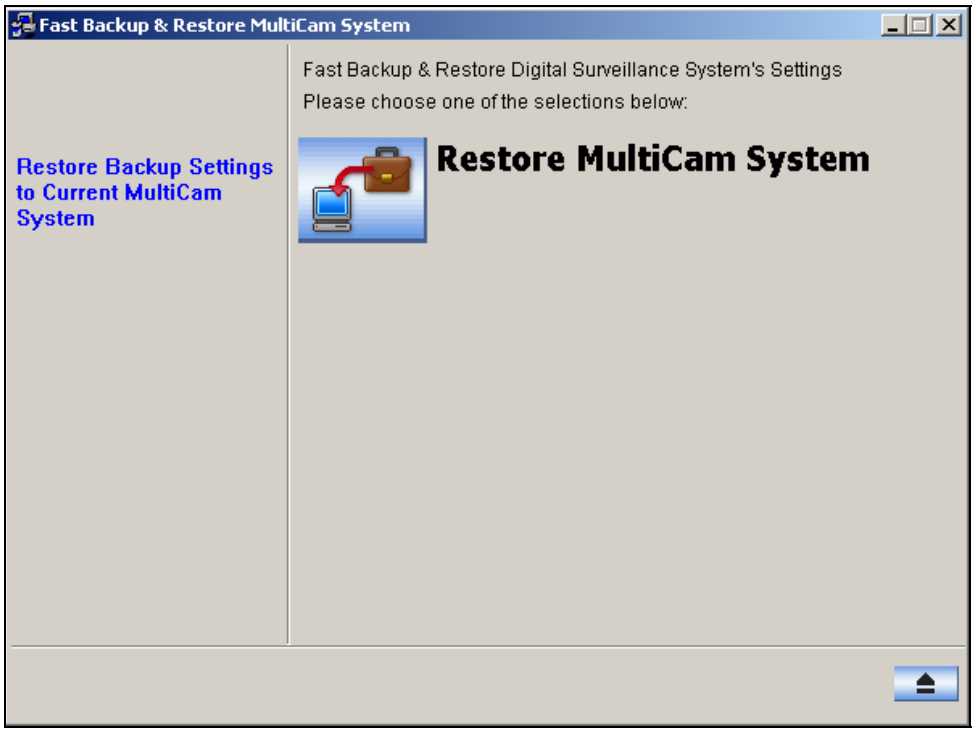

Fast Backup & Restore MultiCam System
Fast Backup & Restore Digital Surveillance System's Settings
Please choose one of the selections below:
Restore Backup Settings to Current MultiCam System
Restore MultiCam System

Figure 11-37

2. Click the **Restore Multicam System** icon, and then check which backup settings you want to restore.
3. Press the **Next Step** button to start restoring.
4. When the restoration is complete, this message will appear: *Successfully Restore MultiCam System Settings*.

Hot-Swap Recording

The program Media Man Tool provides a hot-swap feature, allowing a non-stop recording. You can add and remove a hot-swap or portable hard drive to the GV-System while the monitoring keeps on. When the new drive is added, it will be configured to the recording path automatically.

Additionally, you can back up ViewLog player and files to play back at any computer.

Note: The hot-swap feature supports the disk capacity of 800 MB at least.

The Media Man Tool Window

This program comes with the installation of Main System. Run **MediaMenTools.exe**. The following window will appear.

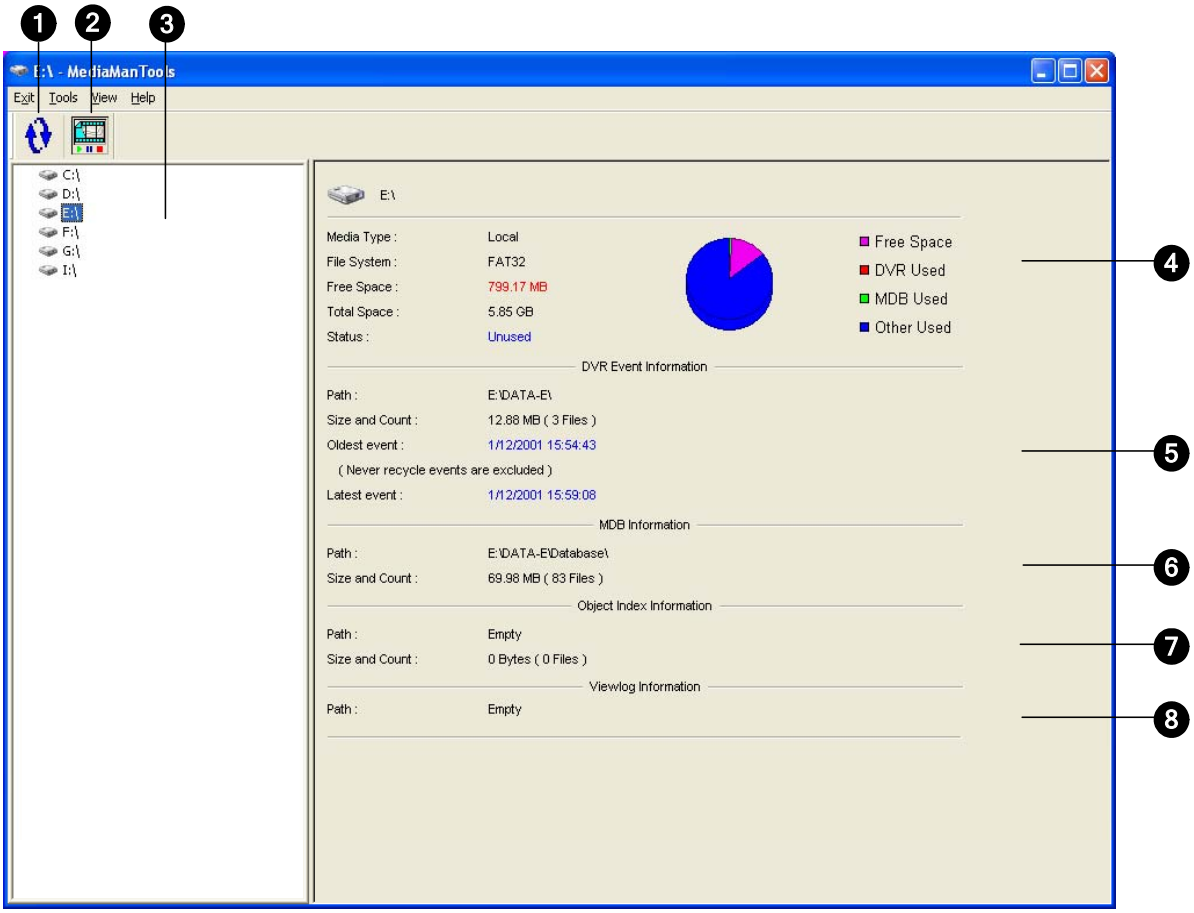


Figure 11-38

The controls on the MediaMan window:

No.	Name	Description
1	Refresh	Updates all data information on the window.
2	Copy ViewLog	Selects a hard drive to copy ViewLog files.
3	Disk List	Selects a disk.
4	Disk Properties	Indicates disk information. In “Media Type,” two messages may appear: • **LAN**: indicates a hard drive is connected. • **Local**: indicates a local hard drive is connected. In “Status”, three messages may appear: • **Standby**: indicates the hard drive already specified as the recording path. • **Unused**: indicates the hard drive not specified as the recording path. • **Recording**: indicates the files are being recorded to the disk.
5	DVR Event Info	Indicates the path, size and number of recorded events; the dates of the oldest and latest events.
6	MDB Info	Indicates the path, size and number of System Log files.
7	Object Index Info	Indicates the path, size and number of Object Index files.
8	ViewLog Info	Indicates the location you have backed up the EZ ViewLog player.

Note: The DVR Event Info updates every one minute. The MDB Info, Object Index Info and ViewLog Info update as data changes.

Adding a Disk Drive

1. Run **MediaManTools.exe**.
2. Insert a hot-swap hard drive or plug a portable hard drive to your computer. This dialog box appears.

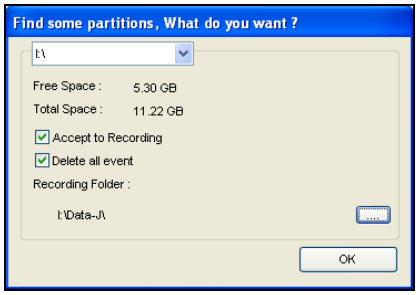


Figure 11-39

- **Accept to Recording:** Adds the hard drive to the recording path.
- **Delete all events:** Deletes the recorded files already on the hard drive.

3. Click **OK** to automatically configure the hard drive to the recording path.

To verify the hard drive is added successfully, select the drive in the MediaMan Tools window and see if "Status" in Disk Properties displays: *Standby*. Or, in Main System, click the **Configure** button and select **Set Location** to confirm the new recording path.

Removing a Disk Drive

On the Disk List, right-click the hot-swap or portable hard drive, and select **Stop for recording**. The "Status" in Disk Properties will display: *Unused*. Then you can remove the hard drive safely.

Note: Removing the hard drive will affect ViewLog database. To restore these events, add the hard drive back to the system and run **Repair Database Utility**.

Backing Up ViewLog Files

You can export ViewLog player and files to play back at any computer without the system.

On the Disk List, right-click the hot-swap or portable hard drive to have these options:

- **Copy ViewLog:** Exports the ViewLog player and files to the hard drive.
- **Recreate ViewLog database:** When the ViewLog player is already on the hard drive, select this option to update the ViewLog files.

To play back files at another computer, simply run **EZViewLog500.exe** from the created ViewLog folder on the hard drive.

Troubleshooting

Hardware

1. Messages "*Can't find keypro*" and "*Card Setup Fail*" appears when GV-System starts.
   - Verify the video capture card drivers (See Chapter1 in the *Installation Guide*).
   - Insert the video capture card to a different PCI slot to see if this fixes the problem.
   - If you are using the video capture card V1, attach an appropriate Keypro to the PC's parallel port and run **Dos2kreg.exe** in the GV-System folder.
   - If your system is upgraded to version 8.0 or above, an appropriate USB dongle is required.

2. A message "*Video Lost*" appears.
   - Check video connection.
   - Make sure the video device is turned on.
   - Make sure the video standard in your country matches the setting in GV-System (See *Choosing Video Source* in Chapter1).
   - Check AGC setting (See *Adjusting Video Attributes* in Chapter 1).
   - Switch the cable from the functional channel to the non-functional channel, and vice versa. If the previously non-functional channel is now able to deliver video, check the video device itself and its related cables.

3. A message "*Can't find I/O Module:1, Address:1, in Com1*" or "*Not GV-IO in COM1*" appears.
   - Check the RS-485 connection between GV-Net Card/Box and GV-IO Box.
   - Check whether the power adapter is properly connected to GV-IO Box.

4. A message "*No PTZ Device Installed" or "Default PTZ Device not Activate*" appears.
   - Make sure the **Active** option is enabled in Main System (See *PTZ Control Panel* in Chapter 1).
   - When multiple PTZ cameras are installed, make sure to activate each PTZ camera individually.

Software

1. How to upgrade to the latest version?
   - Download the latest version from GeoVision website: http://www.geovision.com.tw/english/5_0.asp

2. Recycle mode doesn't work, and recording stops.
   - Exit Main System, and run **RepairLog500.exe** from the system folder to fix this problem.
   - Check Properties of the folder used for saving video files. Make sure the **Read Only** option is disabled.

3. Passwords are lost. Cannot access my GV-System.
   - See *Setting Up for Password* in Chapter 1 for details.

4. A message "*Directdraw overlay fail*" appears.
   - Make sure your VGA card meets the GV-System's minimum requirement that is NVIDIA GeForce II MX 32MB.
   - The driver included in your VGA card package may not be the latest and might not support Directdraw. Visit related websites and upgrade your VGA driver to the latest version.
   - Disable the Directdraw feature if you do not wish to upgrade your VGA card or driver (See *Configuring Global Recording Parameters* in Chapter 1).

5. Shifted horizontal lines appears in the 640x480 video image.
   - Enable De-Interlace Render (See *Configuring Global Recording Parameters* in Chapter 1). This feature requires the VGA card of DirectX9. Make sure to upgrade your VGA card driver and DirectX version.

6. Unable to record audio, even though all setups and configurations are done correctly.
   - Audio recording is not available in the 640x480 video resolution (See *[Wave-In Device], Camera/Audio Install* in Chapter1).

7. Can't invoke hotline alerts.
   - GV-System only supports external modem using Zyxel or Lucent chipset.
   - Make sure Modem Device and Com Port are set up properly (See *[Modem Configure], Configuring Hotline/Network Notification* in Chapter1).

8. A “?” mark appears in the ViewLog’s event list window.
   - These files may already been deleted in the previous Recycle run. Exit Main System and run **RepairLog500.exe** under the system folder to remove these files from the database.

9. Unable to play back audio in ViewLog
   - The video you select may not have any audio records.
   - The speaker icon at the lower right corner is not enabled (See Figure 4-1 in Chapter 4).
   - Audio can only be played back at 1X speed.

Remote Application

1. Remote View is unable to display video from GV-System.
   - This symptom may appear when Remote View is installed in Windows XP SP1 or later. Windows XP no longer includes Wavelet decoder after Service Pack 1. You may download a Wavelet codec at this link.
     http://geo-support.dipmap.com:100/remote/waveletcodec.zip
   - GV-System version 6.0 is not compatible with Remote View version 5.4.0.1 or earlier. Make sure your GV-System and Remote View are both version 6.0 or later.

2. Network ports used in the remote applications:

<table>
<tr>
<td rowspan="2">WebCam:
Http = 80
FTP = 21
Command = 4550
Data = 5550
Audio = 6550
Remote Control = 3389

RemotePlayBack:
RPBSvr = 5066

RemoteView:
TCPSvr = 3550</td>
<td>TwinServer:
Server = 9650

TwinDVR:
Http = 80
FTP = 21
Command = 4550
Data = 5550
Remote Control = 3389

IP Multicast:
DMMCast = 3650</td>
<td rowspan="2">CenterV2:
Center = 5547
Command = 5548
Connection Port = 5545
Data = 5549
Audio = 5546

Dispatch Server:
Server = 21112

GeoCenter:
Server = 20001

DMIP:
FTP = 21</td>
</tr>
<tr>
<td>Authentication Server:
Server = 3663</td>
</tr>
<tr>
<td>VSM
Server = 5610</td>
<td>SMS
Server = 6886</td>
<td>DDNS
Server = 80 and 81</td>
</tr>
<tr>
<td>Control Center
Command Port = 3388
Data Port = 5611
Log Port = 5552</td>
<td></td>
<td></td>
</tr>
</table>

WebCam

1. A message "*can't connect to server*" appeared when GV-System is connected.
   - Check ports 4550 and 5550 are enabled in Firewall.
   - Check whether ports 4550 and 5550 are occupied by another application.
   - Check NAT port mapping is correct.
   - Check whether the dynamic IP address of GV-System is changed.
   - Check Ethernet adapter (ADSL modem must use the PPP/SLIP device).
   - Check whether Web server changes download timing. (Dynamic Lan IP =1 min, Dynamic WAN IP = 5 min)

2. Unable to use the two-way audio feature.
   - Check whether port 6550 is available.
   - Check the client PC's sound card driver.
   - This feature requires DirectX 8 or later. Perform upgrade if necessary.
   - This feature requires Internet Explorer 6.0 or later. Perform upgrade if necessary.
   - Check GV-System's audio signal by using the Camera / Audio Install function (See *Camera/Audio Install* in Chapter 1).

3. Unable to run MPEG4 Encoder Viewer and WebCam RPB.
   - The security level of your IE browser may prevent WebCam components from downloading to your PC. Start IE browser and go to Tools/ Internet Options/ Security/Custom Level. In Active X controls and plug-ins options, select Enable or Prompt, and then click OK. Log in to GV-System again and WebCam components should be downloaded properly.

4. What version of OS does G-View support?
   - G-View of V6.0 or above supports WinCE 3.0, Pocket PC2002, Pocket PC2002 Phone Edition, Pocket PC2003, and Pocket PC2003 Phone Edition.